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ABSTRACT

This publication is one of the courses from the Oklahoma Practical Nursing series of competency-based training programs designed to coordinate the job-related experience and knowledge needed by personnel working in a practical nursing position. The nutrition module includes several concepts that are integrated throughout the Practical Nursing series: nursing process, patient teaching, wellness, nutrition, safety, life span, medication, documentation, cultural differences, and professional leadership and development. This module contains two instructional units that cover the following topics: (1) applying principles of basic nutrition and (2) applying principles of diet therapy. Each instructional unit follows a standard format that includes some or all of these basic components: performance objectives, information sheets, assignment sheets, activity sheets, handouts, supplements, transparency masters, tests, and answers to tests and assignment sheets. All of the unit components focus on measurable and observable learning outcomes. (KC)

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NUTRITION

TEACHER EDITION

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Oklahoma Department of
Vocational and Technical Education
Stillwater, Oklahoma

Nutrition

Developed by the
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for the division of Health Occupations
Oklahoma Department of Vocational and Technical Education

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FOREWORD

This publication is one of the courses from the Practical Nursing series of competency-based training programs designed to coordinate the job related experience and knowledge needed by personnel working in a practical nursing position.

The information found in each of the courses in the Practical Nursing series will help you in planning and implementing a current, practical approach to learning. Although this series reflects a systematic approach to instructional materials development and the latest in educational technology innovations, the instructor should adapt and modify information in the Practical Nursing series to coincide with local conditions and specific student/client needs.

ROY PETERS, JR.
State Director

MARY M. RANDALL
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PREFACE

The nursing profession and the role the nurses assume today are greatly changed from past years. Depending on the local situation the nurse may find the responsibilities specifically defined and very restrictive or all encompassing. Large facilities tend to have more specialized teams while small or rural facilities may rely on the nurse to "do it all."

Realizing the constraints of time and energy this series was designed to teach competencies that would train the nurse to perform tasks that would be expected on the job, no matter what size the facility or where it was located; safety precautions for working with patients was also heavily stressed.

Nutrition is but one course in the Practical Nursing series.

Several concepts are integrated throughout the series. Nursing process, patient teaching, wellness, nutrition, safety, life span, medication, documentation, cultural differences and professional leadership and development are all included when appropriate.

Nursing educators must make decisions concerning the amount and depth of information needed in the curricula to prepare students to meet the challenges they will find in the nursing profession today. The Practical Nursing series provides the basic information needed today to prepare nurses for tomorrow.

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USE OF THIS PUBLICATION

INSTRUCTIONAL UNIT

The format of *Practical Nursing* includes basic components that form a unit of instruction: objective sheet, suggested activities, transparency masters, handouts, information sheet, supplements, activity sheets, assignment sheets and test.

The unit components "zero in" on measurable and observable learning outcomes. When applicable, the unit includes activities that use the affective domain. Instructors may supplement, personalize, localize, and motivate with these materials to develop a complete teaching/learning process.

The instructor will need to decide methods of presentation and demonstration to meet the needs of students. Careful study of each unit of instruction will help the instructor plan the presentations:

How to use materials for independent study
Amount of material to cover in each class period
Skills—Supplies and equipment needed
Amount of class time needed for demonstrations
Amount of practice needed
Supplementary materials, such as pamphlets or videos, to order
Resource people to contact

Objective Sheet (white pages)

Each unit of instruction is based on the knowledge and skills needed for successful employment in an occupational area. Objectives are stated in two forms: unit objective stating the subject matter to be covered in a unit of instruction, and specific objectives stating the performance necessary to reach the unit objective. Because the objectives of the unit provide direction for the teaching/learning process, teachers and students must have a common understanding of the intent of the objectives. Each student should have a copy of the objective sheet to refer to throughout the teaching/learning process. This will help answer any questions concerning performance requirements.

The objectives can also help determine teaching strategies and instructional methods. Prepare for each unit by deciding how each objective can best be taught, depending on individualized or class instruction. Instructors should feel free to modify, delete, or add objectives to meet the needs of the students and community. If there are changes in the objectives, the instructor should supply the additional information, assignment, procedure, or activity sheets, and criterion test items.

Suggested Activities (pink pages)

This component is included only in instructor material. The suggested activities page assists the instructor during the preparation stage of the teaching/learning process by providing suggestions for delivery and/or presentation during the instructional process. Read the suggested activities before teaching the units to allow time to obtain supplemental materials, prepare audio-visual materials, and contact outside resources. Duties of the instructor will vary according to the particular unit.

The references that are listed are ones used in the development of each unit. They should be used by the instructor to provide supplemental knowledge about the subject or to help students with particular interests or occupational objectives.

Handouts (white pages)

Handouts are additional teaching aids that support portions of the information sheet. Handouts include such activities as games, puzzles, and additional information (which is intended to be used as the instructor deems necessary.)

Handouts may be photocopied for classroom use only.

Information Sheet (green pages)

This component includes additional information for understanding the topic but does not have direct application to specific objectives.

Notes are short verbal additions to the information sheet that provide nice-to-know and decision-making information. A note may tell the student what to watch for or to consider at a given step. It may explain when a step may not be applicable. Notes offer guidance that may help the student understand the process and do it more efficiently.

Cautions are advisories that tell how to avoid damage to equipment or facilities.

Warnings are advisories that tell the student how to avoid personal injury or death to the student, client, or other persons in the workplace.

Supplements (green pages)

Supplements include material that provides additional information for understanding the topic but does not have direct application to specific objectives.

Transparency Masters (white pages)

Transparency masters provide information in a special way. Transparencies direct the class's attention to the topic of discussion. Transparencies may present new information, or they may reinforce information presented in the information sheet. They are particularly effective when identification is necessary. Make transparencies and place them in the notebook where they will be immediately available for use.

Activity Sheets (tan pages)

The purpose of activity sheets is to provide activities not directly in support of any one objective but that support several objectives or seek to influence the student's beliefs, attitudes, or appreciation of the study area.

Activity sheets vary greatly in their number and design. Some deal with the student attitudes and beliefs. These are not intended for review by anyone other than the student. Some activity sheets require the student to make written or oral reports.

Assignment Sheets (tan pages)

Assignment sheets provide written exercises for instruction and practice of a specific objective. The introduction to the assignment sheet explains how the assignment sheet relates to the subject area and unit objectives and may provide instructional information or refer students to another component for such information.

Assignment sheets are intended to provide students with practice in exercising higher-order thinking skills. Often, assignment sheets will contain case studies or story problems or other situations in which the student must analyze the circumstances and determine correct responses.

Job Sheets (blue pages)

Job sheets are another important segment of a unit of instruction. The job sheets provide a list of equipment, tools, and materials needed to complete each task or job. Diagrams, photographs, and illustration are provided to assist students in achieving the skill.

The instructor should demonstrate to students the procedure outlined in each job sheet. Further more, the instructor needs to localize the job sheet according to the equipment and supplies available in the local lab or shop situation. Job sheets also furnish potential employers with a picture of the skills being taught and the performances they might reasonably expect from a person who has had this vocational instruction.

Practical Tests (yellow pages)

Practical tests or evaluation sheets are intended to provide consistency in evaluating performance objectives.

Written Test (yellow pages)

The test provides criterion-referenced evaluation on every objective listed in the unit of instruction. The instructor may individualize the test as needed.

Written Test Answers (pink pages)

The acceptable response on a unit test, 85 percent in most units, applies to the overall score, not to each individual question. The final unit grade should be obtained by using the paper/pencil score along with evaluations for students' demonstration of the desired skills.

Answers to Pretest, Assignment Sheets, Written Test Answers (pink pages)

These components are designed to assist the instructor in evaluation of student performance. These are available in the teacher's edition only.

METHODS OF DISSEMINATING MATERIAL

For best results, provide student materials for each student. Student materials contain everything but the instructor's supplements and answers to the test.

TEACHING METHODS

Keeping students motivated is a challenge. Supplement the objectives by providing the "why," personal experiences, and current information. If you are going to teach the material in a group setting, prepare for the unit by deciding the best way to teach each objective and allow for student input.

If you are going to follow the plan for individualized instruction, provide opportunities that will allow each student to become involved in planning for and being responsible for his or her own education.

COMPETENCY PROFILES

A competency profile is available for each CIMC publication. Competency profiles document student performance. The profile contains a list of the specific job competencies that a student should achieve before leaving the training program. Profiles should be distributed to students as required.

CORRECTIONS AND SUGGESTIONS

The Curriculum and Instructional Materials Center (CIMC) wants to provide vocational instructors and students with materials that are accurate and effective. Although the CIMC strives to maintain the highest standards of development and production, oversights occasionally do occur. If you find any errors in this or other CIMC publications, or have suggestions for improving their usefulness in vocational programs, please notify the CIMC staff. One easy way of pointing out errors is to make a photocopy of the affected page and to indicate the correction on the copy. Mail this information to the CIMC, where it will be used to correct the publication before the materials are reprinted.

To ensure that the material is updated on a timely basis, notify the CIMC of necessary corrections as soon as possible after discovering the error. Do not assume that someone else will notice the error and inform the CIMC; other users may be making the same assumption. Please send corrections and recommendations for improving this publication to the following address:

Curriculum and Instructional Materials Center
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Technical Education
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NUTRITION

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Unit **Page**

Apply Principles of Basic Nutrition I-1

Apply Principles of Diet Therapy II-1

OBJECTIVE SHEET

APPLY PRINCIPLES OF BASIC NUTRITION

I

INTRODUCTION

"Nurse, the doctor says I should eat foods high in potassium because I take this diuretic. What kinds of foods are high in potassium?"

"She said I won't stay healthy if I don't have complete proteins in my diet. What did she mean?"

"I don't want to have a heart attack. Would changing my diet help?"

Almost on a daily basis the licensed practical nurse (LPN) must deal with problems and questions regarding dietary intake. Proper nutrition is very important in maintaining a state of wellness in each individual. The LPN must have a sound basic knowledge of nutrition in order to assist the registered nurse and the dietician to guide patients toward a daily food intake that supplies all of the nutrients necessary to meet normal body needs and maintain health. Also, the practical nurse can use information about nutrition for personal benefit. Given the high physical demands of nursing today, every nurse should seek to improve and maintain personal health through the practice of healthy food habits.

PREREQUISITE

None

UNIT OBJECTIVE

After completing this unit, the student should be able to apply a knowledge of nutrients and nutritional requirements for a state of wellness to assist in the evaluation of an adult patient's normal nutritional requirements and to assist in the instruction of adult patients regarding their normal daily dietary needs. The student will show these competencies by completing assignment sheets and written tests with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, the student should be able to

1. Match terms associated with nutrition to their correct definitions.

2. Identify the correct definition for each nutrient.

3. Identify the functions of carbohydrates.
4. List examples of the principal sources of carbohydrates in the diet.
5. Identify the functions of proteins.
6. Distinguish between the characteristics of a complete and an incomplete protein.
7. Distinguish between sources of complete and incomplete proteins.
8. Discuss the characteristics of complementary proteins.
9. Identify the functions of fat.
10. Distinguish between the characteristics of saturated and unsaturated fats.
11. Distinguish between sources of saturated and unsaturated fats.
12. Identify the characteristics of cholesterol.
13. Distinguish between foods that contain large amounts of cholesterol and those that do not contain cholesterol.
14. Identify the characteristics of triglycerides.
15. Identify dietary sources of triglycerides.
16. Identify the correct percentages of fats, carbohydrates, and proteins that are recommended for the daily diet of a healthy adult.
17. Identify the number of calories in one gram of carbohydrate, protein, and fat.
18. List the factors that affect an individual's energy requirements.
19. Identify the general characteristics of vitamins and minerals.
20. Distinguish between the fat-soluble and water-soluble vitamins.
21. Distinguish between characteristics of fat-soluble and water-soluble vitamins.
22. Identify the functions and major sources of selected vitamins.

23. Match the commonly used names of selected vitamins to their chemical names.

24. Identify the functions and major sources of selected minerals.

25. Identify the functions and major sources of fiber.

26. Calculate the caloric value in meals. (Assignment Sheet 1)

27. Evaluate menus for nutritional adequacy. (Assignment Sheet 2)

PREPARATION

- Order materials to supplement unit.
- Invite a guest speaker to discuss the importance of good nutrition for the L.P.N.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of food.
- Make a poster of various foods that are high in calories but empty in most nutrients.
- Make a poster of favorite foods, emphasize nutritional values by showing comparisons of meals in calories, fats, proteins, carbohydrates, and salt.
- Make a poster of different sources of saturated and unsaturated fats.
- Make a bulletin board showing different food groups rich in vitamins and minerals.
- Devise games and/or crossword puzzles to reinforce terms, groupings, etc.
- Decide how the pretest will be used and complete arrangements as required.
- **HOSA** Integration:
  - Assist student to conduct a chapter service project on proper nutrition.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules— display in highly visible areas.
  - Plan community or school health project that involves disseminating pamphlets about effects of foods on health.

DELIVERY

- Discuss unit goal.
- Show film "*The Wellness Revolution*" and/or video cassette "*Inside/Out: The Story of Food and Fitness.*"
- Have speaker discuss importance of good nutrition in maintaining the health of the practical nurse.

Objective 1

- Discuss terms associated with nutrition.

Objective 2

- Discuss classes of nutrients.
- Have students play reinforcement games and work crossword puzzles using terms in objectives 1 and 2.

Objectives 3 and 4

- Discuss principal functions and sources of carbohydrates in the diet.
- Display pictures or models which show sources of carbohydrates.

Objective 5

- Discuss the functions of proteins.

Objectives 6 and 7

- Discuss sources and characteristics of complete and incomplete proteins.
- Use models and pictures of food to help students identify sources of complete and incomplete proteins.

Objective 8

- Discuss characteristics of complementary proteins.
- Have students help identify commonly used non-animal foods that could be combined in a meal to provide all of the necessary amino acids.

Objective 9

- Discuss the functions of fat.

Objectives 10 and 11

- Discuss the sources and characteristics of saturated and unsaturated fats.
- Display a poster that shows the different sources of saturated and unsaturated fats.

Objectives 12 through 15

- Discuss the characteristics of cholesterol and the foods high in cholesterol.
- Discuss the types of foods that contain no cholesterol.
- Emphasize to students that not all cholesterol is unhealthy and that the body does require some cholesterol for daily use.
- Discuss characteristics of triglycerides and their food sources.

Objective 16

- Discuss the importance of a healthy balance of fats, carbohydrates, and proteins in the diet of an adult.
- Stress that the safest and easiest way to cut calories is to reduce the amount of fat in the diet.
- Practice calculating the percentages of carbohydrates, proteins, and fats that a person consumes in his daily diet.
- Discuss the correct percentages of fats, proteins, and carbohydrates that are recommended for the daily diet of a healthy adult.

Objective 17

- Discuss the number of calories in one gram of fat, protein, and carbohydrate.
- Use examples to illustrate how calories can be calculated.
- Select favorite foods and determine the number of calories in each item.
- Discuss the impact a diet high in fats can have on weight loss or gain.

Objective 18

- Discuss factors that affect energy requirements and how each person may have different energy requirements.
- Discuss metabolism, include information about the body using calories during rest periods.
- Discuss how strict diets can slow metabolism and "fool" the body into changing the metabolism rate and how weight may actually be gained rather that lost.

Objectives 19 through 24

- Discuss general characteristics of vitamins and minerals.
- Show one or more of the following films: "*Nutrition: Vitamin Wise*", "*Vitamins: What Do They Do?*", and/or "*Vitamin Basics (Part II).*"
- Discuss differences between fat-soluble and water-soluble vitamins and their characteristics.
- Display foods that are good sources of vitamins.
- Discuss the functions and major sources of selected vitamins.
- Discuss commonly used names for vitamins and their chemical names.
- Display foods that are good sources of minerals.
- Identify functions and major sources of selected minerals.
- Select certain foods and discuss all of the vitamins and minerals found in these foods.
- Discuss Supplement 1—Clinically Important Minerals.

Objective 25

- Discuss the functions and major sources of fiber.
- Discuss the need for fiber in the diet. Relate the information to problems that result from a low intake of fiber.
- Have students select foods to produce menus that are sufficient in fiber. Compare the information to the typical diet of the student.

APPLICATION

Objective 26

- Discuss Assignment Sheet 1. Have students complete the exercises.
- Have students keep a record of their food intake for 24 hours and calculate the calories that they have consumed.
- Display poster of foods that are high in calories but empty in most nutrients.

Objective 27

- Show the video "*The Nuts and Bolts of Nutrition: Basic Nutrition.*"
- Discuss Supplement 2—Laboratory Tests Commonly Used For Nutritional Assessment.
- Discuss Supplement 3—The Basic Four Food Groups.
- Use models of foods to show the Basic Four Food Groups.
- Discuss Assignment Sheet 2. Have students complete the assignment sheet.
- Direct interested students to computer analysis of nutrients in the diet—"Nourish Check—The Nutritional Analysis Manager."

EVALUATION

Pretest

- Pretest qualifying students.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the written test actions listed in the specific objectives.
- Give written test.
- Evaluate students on assignment sheet activities if not previously completed.

- Reteach and retest if necessary.
- Complete appropriate section of competency profiles.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

- "*Inside/Out: The Story of Food and Fitness*", Color, 29 min., 1983. VHS or Beta. National Audiovisual Center, Customer Services Section, 8700 Edgeworth Drive, Capital Heights, Maryland 20743.
- "*Nutrition: Vitamin Wise*", Color, 19 min., 1982. 16mm. Aims Media, Inc., 6901 Woodley Ave. Van Nuys, CA 91406.*
- "*The Wellness Revolution*", Color, 30 min., 1983. 16mm. Sunset Films, 625 Market Street, San Francisco, CA 94105.*
- "*Vitamins: What Do They Do?*", Color, 21 min., 1980. 16mm. Alfred Higgins Prod., Inc., 9100 Sunset Blvd., Los Angeles, CA 90069.*

  NOTE: The films marked with * are available on a free-loan basis to Oklahoma teachers from the Oklahoma State Department of Vocational and Technical Education/Resource Center, 1500 West Seventh Avenue, Stillwater, Oklahoma. 74074. Toll-free 1-800-522-5810.

- "*The Nuts and Bolts of Nutrition: Basic Nutrition*", 27 min., video from a filmstrip. Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth CA 91311. Phone (818) 341-2535.
- "*Vitamin Basics*", 35 min., VHS video or filmstrip with audio cassette. Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth CA 91311. Phone (818) 341-2535.

Computer Software

- Computer Disk "Nourish Check—The Nutritional Analysis Manager, Apple 48K, IBM 64K. Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth CA 91311. Phone (818) 341-2535.

UNIT REFERENCES

Publications

- *Oklahoma State Diet Manual*, can be purchased from the OSUTB Bookstore, Student Center, Room 105, 900 N. Portland, Oklahoma City, OK. 73107. Phone (405) 945-3201.
- *HOSA: Learn, Grow, Become*, Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, Stillwater, OK., 1989.
- Holman, Susan R. *Essentials of Nutrition for the Health Professions*. J.B. Lippincott Company/Philadelphia, Pennsylvania, 1987.
- Kimmel, Georgia W., ed. *Oklahoma Diet Manual*, 8th Ed. Oklahoma Dietary Association/Oklahoma City, Oklahoma, 1987.
- Lewis, Clara Mixon. *Nutrition and Nutritional Therapy in Nursing*. Appleton-Century-Crofts/Norwalk, Connecticut, 1986.
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PRETEST ANSWERS
APPLY PRINCIPLES OF BASIC NUTRITION
I

OBJECTIVE 1

1. o
2. h
3. j
4. g
5. m
6. l
7. i
8. r
9. k
10. f
11. c
12. a
13. b
14. e
15. n

OBJECTIVE 2

1. g
2. b
3. a
4. f
5. c
6. e
7. d

OBJECTIVE 3

1, 2, 3, 5, 6, 9

OBJECTIVE 4

Answer must include all of the following:

1. Plants—Grains and grain products
   Sugar and sugar products
   Starchy vegetables
   Fruits

2. Animals—Milk

OBJECTIVE 5

3, 4, 7, 8, 9, 10, 11

OBJECTIVE 6

1. C
2. C
3. I
4. I
5. I
6. I
7. C

OBJECTIVE 7

1. C
2. I
3. I
4. I
5. I
6. C
7. C
8. C
9. C
10. I

OBJECTIVE 8

Answers should include:

- Incomplete protein foods that can be combined in the diet to provide the amino acids found in complete proteins.
- Proteins that are from vegetable origin
- Used by vegetarians to maintain health

OBJECTIVE 9

1, 3, 5, 6, 7, 9, 10

OBJECTIVE 10

1. U
2. S
3. U
4. S
5. U
6. S
7. S

OBJECTIVE 11

1. S
2. S
3. S
4. S
5. U
6. U
7. S
8. S
9. S
10. S
11. U
12. U

OBJECTIVE 12

1, 2, 3, 4

OBJECTIVE 13

3, 4, 5, 6, 7, 8, 9

OBJECTIVE 14

1, 3, 4

OBJECTIVE 15

1, 2, 4, 5, 7, 8, 9, 10

OBJECTIVE 16

3

OBJECTIVE 17

1. Fats—nine calories per gram
2. Carbohydrates—four calories per gram
3. Proteins—four calories per gram

OBJECTIVE 18

Answer should include five of the following:

- Physical activity
- Age
- Size
- Sex
- Physical condition
- Climate

OBJECTIVE 19

1. T
2. F
3. T
4. T
5. F

OBJECTIVE 20

1. FS
2. WS
3. WS
4. WS
5. WS
6. WS
7. FS
8. FS
9. FS
10. WS
11. WS

OBJECTIVE 21

1. WS
2. FS
3. FS
4. WS, FS
5. FS
6. WS
7. WS
8. FS
9. FS
10. WS

OBJECTIVE 22

1. d
2. c
3. c
4. a
5. b
6. b
7. c
8. d
9. a
10. b
11. a

OBJECTIVE 23

1. d
2. f
3. j
4. i
5. c
6. e
7. b
8. a
9. g
10. k

OBJECTIVE 24

1. b
2. c
3. c
4. a
5. a
6. d
7. b
8. d
9. d

OBJECTIVE 25

1. c
2. a

OBJECTIVE 26 Refer to answers to Assignment Sheet 1.

OBJECTIVE 27 Refer to answers to Assignment Sheet 2.

PRETEST

APPLY PRINCIPLES OF BASIC NUTRITION

I

NAME ______________________________ SCORE ________

OBJECTIVE 1

Match terms associated with nutrition to their correct definitions. Each blank should have only one letter written in it. Some letters will not be used. (Question is continued on the following page.)

___ 1. Pertaining to or derived from living organisms

___ 2. A protein that causes or increases the rate of a chemical reaction without being changed itself

___ 3. A fat related liquid contained in all food fats and in the body fat stores

___ 4. Used to describe foods that have been improved in nutritive value by the addition of vitamins and minerals while the food is being processed

___ 5. All of the physical and chemical processes in an organism by which energy is made available and by which the living matter of cells and tissues is produced, maintained, and destroyed

___ 6. A metric unit of weight

___ 7. A simple sugar, formed by the break-down of carbohydrates, that is utilized by the body cells for energy; blood sugar; dextrose

___ 8. Capable of being dissolved

___ 9. A substance stored in the liver and muscles that can be converted rapidly into glucose; storage form of carbohydrates

a. Adipose tissue
b. Amino acids
c. Calorie
d. Caloric value
e. Compound
f. Element
g. Enriched or fortified
h. Enzyme
i. Glucose
j. Glycerol
k. Glycogen
l. Gram
m. Metabolism
n. Nutrient
o. Organic
p. Pound
q. Saturated
r. Soluble
s. Unsaturated

___10. A substance that cannot be broken into simpler substances by chemical means

___11. A unit of measurement that determines the heat or energy value of a food

___12. Groups of cells in the body that store fats

___13. The building blocks of which proteins are constructed

___14. A substance composed of two or more elements or parts

___15. A substance in a food that contributes to the proper functioning and structure of the body

OBJECTIVE 2

Identify the correct definition for each nutrient. Write the letter of the correct answer in the blank provided. Some letters will not be used.

___1. The indigestible carbohydrate portion of a food

___2. Organic compounds (amino acids) composed of carbon hydrogen, oxygen, and in addition, nitrogen

___3. Chemical compounds of the elements carbon, hydrogen, and oxygen that are converted by the body into glucose and glycogen; sugars and starches

___4. Elements which are used by the body in its regulatory functions and in forming some of its structures

___5. The clear and colorless liquid composed of hydrogen and oxygen that accounts for fifty-five to sixty-five percent of an adult's body weight

a. Carbohydrates
b. Proteins
c. Water
d. Vitamins
e. Fats
f. Minerals
g. Fiber
h. Calories
i. Compounds
j. Elements
k. Functions

___ 6. Combinations of fatty acids and glycerol containing the elements carbon, hydrogen, and oxygen; lipids

___ 7. Organic compounds needed in very small amounts for the regulation of various reactions in the cells

OBJECTIVE 3

Identify the functions of carbohydrates. Write an "X" in the blank in front of the statement(s) that identify the functions of carbohydrates.

___ 1. Keep tissue proteins from being broken down by the body for use as an energy source

___ 2. Provide a quick source of energy and fuel for the body

___ 3. Provide lactose (milk sugar)

___ 4. Combine with minerals to form the bones and teeth

___ 5. Provide a good source of glucose for the central nervous system

___ 6. Conserve body proteins for tissue building and repair

___ 7. Help manufacture Vitamin D

___ 8. Help stabilize cell membranes for the transport of nutrients

___ 9. Aid in the prevention of the inefficient burning of fats

OBJECTIVE 4

List examples of the principle sources of carbohydrates in the diet.

1. List four examples of plant sources.

____

____

____

____

2. List one example of an animal source.

____

OBJECTIVE 5

Identify the functions of proteins. Write an "X" in the blanks before each statement that identifies a function of protein.

____ 1. Help in producing an enzyme that releases energy from carbohydrates and fats

____ 2. Regulate the actions of potassium

____ 3. Help to maintain a normal amount of fluid in the bloodstream

____ 4. Aid in maintaining a normal acid-base balance of the cells and bloodstream

____ 5. Help in conserving the body's supply of minerals

____ 6. Are used to make body secretions, enzymes, hormones, and milk

____ 7. Combine with the mineral iron to form the hemoglobin in red blood cells

____ 8. Provide resistance to infection

____ 9. Transport some vitamins, minerals, and fats in the blood to various sites

____ 10. Help with normal blood clotting

____ 11. Can be used for heat and energy by the body cells

____ 12. Are necessary for the release of carbon dioxide from the cells

OBJECTIVE 6

Distinguish between the characteristics of a complete and an incomplete protein. Write "C" in the blank in front of characteristics of a complete protein and an "I" in the blank in front of the characteristics of an incomplete protein.

____ 1. Builds and repairs tissue

____ 2. Found in foods of animal origin

____ 3. Contains only part of the amino acids that cannot be produced by the body

____ 4. Cannot maintain life by themselves

____ 5. Cannot support growth by themselves

____ 6. Found mainly in food of plant origin

___ 7. Contains all of the amino acids that cannot be produced by the human body

OBJECTIVE 7

Distinguish between sources of complete and incomplete proteins. Write "C" in the blank in front of the source of a complete protein and an "I" in the blank in front of the source of an incomplete protein.

___ 1. Meat

___ 2. Cereal

___ 3. Beans

___ 4. Gelatin

___ 5. Peanuts

___ 6. Eggs

___ 7. Poultry

___ 8. Fish

___ 9. Milk

___ 10. Peas

OBJECTIVE 8

Discuss the characteristics of complementary proteins. Include three characteristics in the discussion.

____

____

____

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____

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OBJECTIVE 9

Identify the functions of fat. Write the letter "X" in the blank before each statement that identifies a function of fat.

____1. Provides padding to protect vital organs in the body from trauma

____2. Aids in the production of the skeletal structures of the body

____3. Is needed for the transportation and absorption of the fat-soluble vitamins

____4. Is responsible for the transport of digestive enzymes into the small intestine

____5. Is a very concentrated source of energy for the body cells

____6. Stores energy in certain tissues of the body

____7. Supplies fatty acids which are needed for normal cells and metabolism

____8. Is totally responsible for the energy that is needed for normal maintenance of the heart and blood vessels

____9. Acts as insulation for body temperature maintenance

___10. Slows digestion in the stomach

OBJECTIVE 10

Distinguish between the characteristics of saturated and unsaturated fats. Write an "S" beside each statement that applies to saturated fats. Write a "U" beside each statement that applies to unsaturated fats.

____1. Can lower blood cholesterol levels when taken in the diet

____2. Are usually of animal origin

____3. Are liquid at room temperature

____4. Are usually solid at room temperature

____5. Are usually of plant origin

____6. Can be oily fats that have been converted to solid fats by the addition of hydrogen

____7. Are more likely to be high in cholesterol content

OBJECTIVE 11

Distinguish between sources of saturated and unsaturated fats. Write "S" in the blank in front of a saturated fat and "U" in the blank in front of an unsaturated fat.

___ 1. Ice cream

___ 2. Egg yolks

___ 3. Lard

___ 4. Bacon grease

___ 5. Corn oil

___ 6. Avocados

___ 7. Chocolate

___ 8. Whole milk

___ 9. Coconut

___ 10. Coconut oil

___ 11. Soybean oil

___ 12. Freshwater fish

OBJECTIVE 12

Identify the characteristics of cholesterol. Write an "X" in the blank in front of the characteristics of cholesterol.

___ 1. Is a normal component of the blood and all body cells

___ 2. Manufactured in the body primarily by the liver

___ 3. Used by the body to help manufacture Vitamin D, hormones, and bile acids

___ 4. May contribute to atherosclerosis if blood levels are high

___ 5. Helps in the prevention of artery disease

___ 6. Is known to be one cause of cancer in humans

___ 7. Is stored in adipose tissue

OBJECTIVE 13

Distinguish between foods that contain large amounts of cholesterol and those that do not contain cholesterol. Write an "X" in the blank before foods that contain large amounts of cholesterol.

____1. Yellow fruits

____2. Skim milk

____3. Liver

____4. Butter

____5. Egg yolks

____6. Cheese made from whole milk

____7. Shellfish

____8. Vegetables

____9. Bacon

____10. Egg-white

OBJECTIVE 14

Identify the characteristics of triglycerides. Write an "X" in the blank before each statement that identifies a characteristic of triglycerides.

____1. Are found widely in food fat and body storage fat

____2. Are necessary for the production of mucus by the mucous membrane linings of the body

____3. If blood levels are high, may contribute to atherosclerosis

____4. Are combinations of alcohol and fatty acids

____5. Are also called cholesterols

OBJECTIVE 15

Identify dietary sources of triglycerides. Write an "X" in the blank before each food that is a source of triglycerides.

____1. Olives

____2. Nuts

____3. Grapes

____4. Vegetable oils

___ 5. Avocado

___ 6. Beans

___ 7. Bacon

___ 8. Lard

___ 9. Whole milk

__ 10. Butter

OBJECTIVE 16

Identify the correct percentages of fats, carbohydrates, and proteins that are recommended for the daily diet of a healthy adult. Circle the number of the correct percentage of fats, carbohydrates,and proteins that are recommended for the daily diet of the healthy adult.

1. Fats—5% of total calories; proteins-40% of total calories; carbohydrates-55% of total calories
2. Fats—22% of total calories; proteins-30% of total calories; carbohydrates-48% of total calories
3. Fats—35% of total calories; proteins-12% of total calories; carbohydrates-53% of total calories
4. Fats—5% of total calories; proteins-6% of total calories; carbohydrates-49% of total calories

OBJECTIVE 17

Identify the number of calories in one gram of carbohydrate, protein, and fat. Write the number of calories in each nutrient in the blank provided.

1. Fats___________________________
2. Carbohydrates____________________
3. Proteins________________________

OBJECTIVE 18

List the factors that affect an individual's energy requirements. List five factors.

____

____

____

____

____

OBJECTIVE 19

Identify the general characteristics of vitamins and minerals. Write a "T" beside each true statement and an "F" beside each false statement.

____ 1. Vitamins and minerals are not "energy" foods since they have no caloric value

____ 2. Vitamins and minerals are not essential to life

____ 3. Minerals are easily lost or destroyed during the storage or cooking process

____ 4. Vitamins and minerals will not relieve a physical illness unless the condition was caused by a lack of that particular vitamin or mineral

____ 5. People need to take vitamin and mineral supplements to provide sufficient amounts in the diet

OBJECTIVE 20

Distinguish between fat-soluble and water-soluble vitamins. Write an "F" in the blanks before fat-soluble vitamins and a "W" in the blanks before water-soluble vitamins.

____ 1. Vitamin A

____ 2. Vitamin B1

____ 3. Vitamin B2

____ 4. Vitamin B6

____ 5. Vitamin B12

____ 6. Vitamin C

____ 7. Vitamin D

___ 8. Vitamin E

___ 9. Vitamin K

___ 10. Niacin

___ 11. Folic acid

OBJECTIVE 21

Distinguish between characteristics of fat-soluble and water-soluble vitamins. Write an "FS" in the blank beside each statement that applies to fat-soluble vitamins. Write a "WS" in the blank beside each statement that applies to water-soluble vitamins. One statement will apply to both fat-soluble and water-soluble vitamins.

___ 1. Are usually not stored in the body if excess amounts are taken because they are readily excreted in the urine

___ 2. Must be transported to various body sites in blood lipids

___ 3. Are removed from the digestive tract before absorption by the body if mineral oil is taken as a laxative near meal time

___ 4. Can be lost in food when poor storage techniques result in wilting and dehydration of fresh item

___ 5. Are not destroyed in foods by ordinary cooking method

___ 6. Are easily destroyed in food

___ 7. Transported to various body sites in the water of the blood

___ 8 Are not absorbed properly by the digestive tract unless sufficient amount of fatty foods are included in the diet

___ 9. Can be stored in the body if excess amounts are taken and cause toxic effects

___ 10. Are easily destroyed in foods by ordinary cooking methods

OBJECTIVE 22

Identify the functions and major sources of selected vitamins. Write the letter of the correct answer in the blanks provided.

____1. Which one of the following groups of foods will be the best source of most of the B-complex vitamins?

a. Raw vegetables

b. Yellow fruits

c. Animal fats

d. Whole-grain and enriched cereals

____2. Which vitamins are necessary for the normal production of red blood cells?

a. Vitamin A and niacin

b. Vitamins B1 and B2

c. Vitamin B12 and folic acid

d. Vitamins C and D

____3. B-Complex vitamins are essential for which of the following functions?

a. Proper growth and functioning of muscle tissue

b. Maintenance of a normal acid-base balance in the blood

c. Proper metabolism of the nutrients in food

d. Production of hormones and other fat-related substances

____4. For which of the following functions is vitamin K necessary?

a. Normal clotting of the blood

b. Normal functioning of nerve tissue

c. Control of the body's water balance

d. Proper metabolism of iron

___ 5. Which vitamin is necessary for proper dim light vision?

a. Vitamin E

b. Vitamin A

c. Vitamin C

d. Vitamin B1

___ 6. Which vitamin is important for the utilization and absorption of calcium?

a. Vitamin C

b. Vitamin D

c. Vitamin B2

d. Vitamin B1

___ 7. Foods that are high in vitamin B12 content include which of the following?

a. Cantaloupes, oranges, and watermelons

b. Avocados, bananas, and potatoes

c. Beef liver, eggs, and lean meat

d. Walnuts, peanuts, and legumes

___ 8. Which of the following menus best meets the requirements for a vitamin especially important to tissue healing?

a. Liver, mashed potatoes, and cooked carrots

b. Baked chicken, steamed white rice, and canned peaches

c. Roast pork, egg noodles, and baked squash

d. Baked fish, mashed potatoes, and lettuce and tomato tossed salad

____9. Egg yolks would be a good source of which of the following vitamins?

a. Vitamins A, D, and E

b. Vitamins B1, B2, and B6

c. Vitamins K, C, and B12

d. Niacin, folic acid, and biotin

___10. What organ manufactures vitamin K?

a. Liver

b. Colon

c. Stomach

d. Spleen

___11. For what is Vitamin E necessary?

a. Stabilization of cell membranes

b. Production of digestive enzymes

c. Rebuilding of damaged skin

d. Protection of nervous tissue

OBJECTIVE 23

Match the commonly used names of selected vitamins to their chemical names. Write the letter of the correct answer in the blank provided. Each blank should have only one letter written in it. Some letters will not be used in a blank.

COMMON NAME	CHEMICAL NAME
___ 1. Vitamin A	a. Tocopherol
___ 2. Vitamin B1	b. Calciferol
___ 3. Vitamin B2	c. Cobalamin
___ 4. Vitamin B6	d. Retinol
___ 5. Vitamin B12	e. Ascorbic acid
___ 6. Vitamin C	f. Thiamine
___ 7. Vitamin D	g. Menadione
___ 8. Vitamin E	h. Biotin
___ 9. Vitamin K	i. Pyridoxine
__ 10. Niacin	j. Riboflavin
	k. Nicotinic acid
	l. Lactose
	m. Glucose
	n. Hormones
	o. Hemoglobin

OBJECTIVE 24

Identify the functions and major sources of selected minerals. Write the letter of the correct answer in the blanks provided.

____ 1. What are the two minerals important in the formation of sound bones and teeth?

a. Iron and potassium

b. Phosphorus and calcium

c. Zinc and iron

d. Sodium and magnesium

____ 2. Which of the following foods would be good sources of the minerals that are important in the formation of sound bones and teeth?

a. Citrus fruits

b. Yellow vegetables

c. Dairy products

d. Red meats

____ 3. For what function is iodine necessary?

a. The manufacture of bile salts

b. The recycling of energy nutrients

c. The production of thyroid hormones

d. The distribution of blood proteins

____ 4. Which of the following is a good source of iodine?

a. Seafood

b. Nuts

c. Liver

d. Oatmeal

___ 5. Which three minerals are necessary for the normal action of muscles?

a. Calcium, potassium, and sodium

b. Potassium, sodium, and phosphorus

c. Sodium, phosphorus, and iron

d. Iron, calcium, and potassium

___ 6. For which of the following is sodium necessary?

a. The transportation of fatty acids in the bloodstream

b. The metabolism of fats and carbohydrates in the body cells

c. The production of factors which help to clot the blood

d. The maintenance of the normal fluid balance of the body

___ 7. What seasoning contains a large amount of sodium?

a. Pepper

b. Salt

c. Saccharin

d. Cinnamon

___ 8. What mineral is important for the formation of a substance in red blood cells called hemoglobin?

a. Potassium

b. Phosphorus

c. Calcium

d. Iron

____9. Which of the following protein foods help the most in the formation of normal hemoglobin?

a. Whole milk cheese

b. Chicken parts

c. Fresh-water fish

d. Red meat

OBJECTIVE 25

Identify the functions and major sources of fiber. Write the letter of the correct answer in the blank provided.

____1. Fiber should be included in the diet in order to

a. Provide a source of quick energy for the intestinal tract

b. Increase the amount of vitamins that are manufactured by the intestines

c. Promote intestinal elimination by increasing muscular action

d. Speed up digestion and metabolism in the intestinal tract

____2. Which of the following food groups are highest in fiber?

a. Whole grain rice, fruit, and vegetables

b. Refined cereals, milk, and eggs

c. Poultry, white bread, and fish

d. Lean beef, fruit juices, and soda crackers

NOTICE

In addition to the pretest items, the student will be required to demonstrate mastery of the following objectives.

OBJECTIVE 26 **Calculate the caloric value in meals.** SCORE ________

OBJECTIVE 27 **Evaluate menus for nutritional adequacy.** SCORE ________

APPLY PRINCIPLES OF BASIC NUTRITION

OBJECTIVE 1

Match terms associated with nutrition to their correct definitions.

- **Adipose tissue**—Groups of cells in the body that store fats
- **Amino acids**—The building blocks of which proteins are constructed
- **Calorie**—A unit of measurement that determines the heat or energy value of a food
- **Compound**—A substance composed of two or more elements or parts
- **Element**—A substance that cannot be broken down into simpler substances by chemical means
- **Enriched or fortified**—A term used to describe foods that have been improved in nutritive value by the addition of vitamins and minerals while the food is being processed
- **Enzyme**—A protein that causes or increases the rate of a chemical reaction without being changed itself
- **Glucose**—A simple sugar, formed by the breakdown of carbohydrates, that is utilized by the body cells for energy; blood sugar; dextrose
- **Glycerol**—A fat-related liquid contained in all food fats and in the body fat stores
- **Glycogen**—A substance stored in the liver and muscles that can be converted rapidly into glucose; the storage form of carbohydrates
- **Gram**—A metric unit of weight

  NOTE: One pound equals approximately 454 grams

- **Metabolism**—All of the physical and chemical processes in an organism by which energy is made available and by which the living matter of cells and tissues is produced, maintained, and destroyed
- **Nutrient**—A substance in a food that contributes to the proper functioning or structure of the body

- **Organic**—Pertaining to or derived from living organisms
- **Soluble**—Capable of being dissolved

OBJECTIVE 2

Identify the correct definition for each nutrient.

- **Water**—The clear and colorless liquid composed of hydrogen and oxygen that accounts for fifty-five to sixty-five percent of an adult's body weight
- **Carbohydrates**—Chemical compounds of the elements carbon, hydrogen, and oxygen that are converted by the body into glucose and glycogen; sugars and starches
- **Proteins**—Organic compounds (amino acids) composed of carbon, hydrogen, oxygen, and nitrogen. Proteins are the only dietary source of nitrogen
- **Fats**—Combinations of fatty acids and glycerol containing the elements carbon, hydrogen, and oxygen; lipids

  NOTE: Fats contain the same elements as carbohydrates except in different proportions.
- **Vitamins**—Organic compounds needed in very small amounts for the regulation of various reactions in the cells
- **Minerals**—Elements which are used by the body in its regulatory functions and in forming some of its structures
- **Fiber**—Roughage; the natural structural part of plants; the indigestible carbohydrate portion of a food

OBJECTIVE 3

Identify the functions of carbohydrates.

- Provide a quick source of energy and fuel for the body. Carbohydrates are digested and absorbed into the bloodstream more rapidly than proteins and fats.

  NOTE: Proteins and fats are also energy foods.
- Spare proteins for tissue building and repair. The provision of energy is only a secondary function for proteins. Carbohydrates need to be taken in the diet and used for body heat and energy purposes so proteins are spared for their primary purpose
- Keep tissue proteins (such as that found in muscle) from being broken down by the body for use as an energy source

- Prevent fats from being inefficiently combined with oxygen to be burned by the body cells for fuel and energy. If adequate carbohydrates are not present in the diet, fats are over-utilized for the production of energy. Produces strong acids called *ketones* which accumulate in the blood and urine of an individual

- Provide glucose, the only energy source for the central nervous system under normal conditions

- Provide lactose (milk sugar). Lactose encourages the growth of favorable intestinal bacteria, has laxative properties, and enhances the absorption of calcium

OBJECTIVE 4 **List examples of the principal sources of carbohydrates in the diet.**

Plant sources

- Grains and grain products

  EXAMPLES: Breads, cereals, pasta (macaroni, spaghetti), rice

- Sugar and sugar products

  EXAMPLES: Honey, corn syrup, molasses, candy

- Starchy vegetables

  EXAMPLES: Potatoes, peas, beans, corn, sweet potatoes, winter squash, black-eyed peas

- Fruits

  EXAMPLES: Bananas, apples, pears

Animal sources

- Milk

  NOTE: Milk contains lactose (milk sugar).

OBJECTIVE 5 **Identify the functions of proteins.**

- Build and repair body tissues
- Help to maintain a normal amount of fluid in the bloodstream. The blood protein albumin draws water into the blood vessels
- Aid in maintaining a normal acid-base balance of the cells and bloodstream
- Are used to help make body secretions, enzymes, hormones, and milk
- Combines with the mineral iron to form the hemoglobin in red blood cells. Without normal hemoglobin, individuals are subject to anemia
- Provide resistance to infection. Antibodies are proteins that respond to the presence of microorganisms and their poisons (toxins) in the body
- Transport some vitamins, minerals, and fats in the blood to various sites
- Help with normal blood clotting. Some blood coagulation factors are proteins.
- Can be used for heat and energy by the body cells

OBJECTIVE 6 **Distinguish between the characteristics of a complete and an incomplete protein.**

Complete proteins

- Contain the eight amino acids that cannot be produced by the adult body and that must be supplied by the diet

  NOTE: There are 20 amino acids. In the adult, the body cells are equipped with enzymes that can combine substances to produce 12 of these amino acids. The eight that cannot be manufactured by the body must be supplied by the intake of complete proteins in the diet. A source of complete protein should be eaten at every meal.

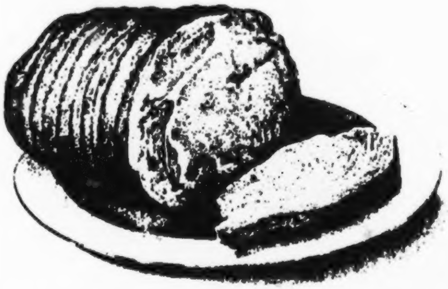
- Are found mostly in foods of animal origin
- Build and repair tissues

Incomplete proteins

- Contain only part of the amino acids that cannot be produced by the human body
- Cannot maintain life or support growth by themselves
- Are found mainly in foods of plant origin

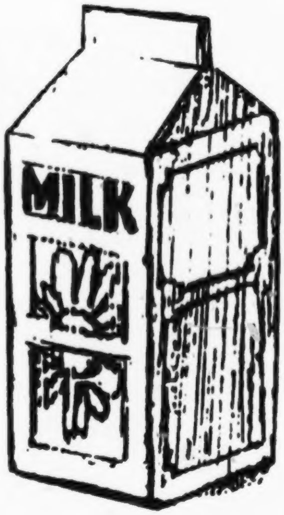
OBJECTIVE 7 **Distinguish between sources of complete and incomplete proteins.**

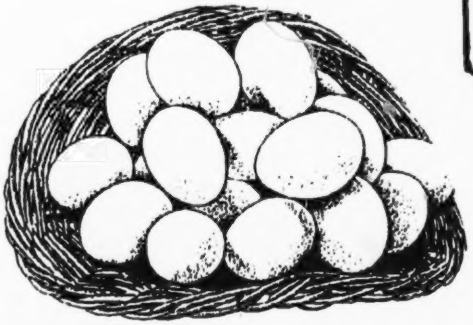
Complete proteins



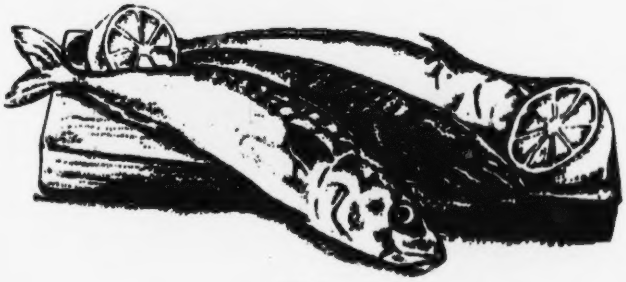
MEAT

MILK

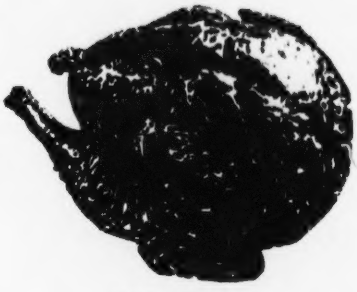




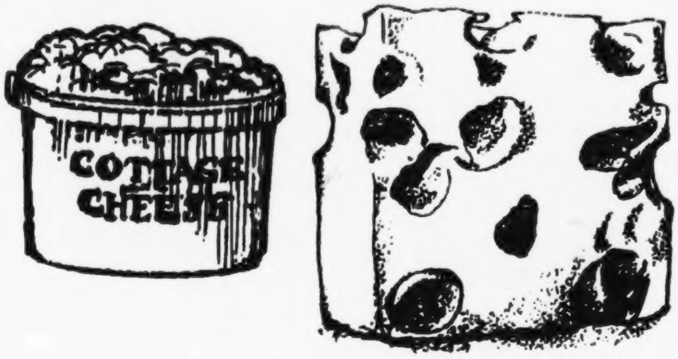
EGGS



FISH



POULTRY


COTTAGE
CHEESE

CHEESE

Incomplete proteins

- Cereals
- Nuts
- Peanuts
- Peas
- Beans
- Gelatin

  NOTE: Gelatin is the only animal source of incomplete proteins.

OBJECTIVE 8

Discuss the characteristics of complementary proteins.

- Are incomplete protein foods that can be combined in the diet to provide the amino acids found in complete proteins
- Are proteins that are from vegetable origin
- Are used by vegetarians to maintain health

  EXAMPLE: Pinto beans and cornbread can be served in the same meal in order to provide the amino acids that would be found in a complete protein.

OBJECTIVE 9

Identify the functions of fat.

- Is a more concentrated source of heat and energy than carbohydrates or proteins
- Helps to spare dietary protein
- Stores energy in the adipose tissue of the body
- Slows digestion in the stomach

  NOTE: A fatty meal remains in the stomach longer and prevents quick return of the feeling of hunger.

- Is needed for the transportation and absorption of the fat-soluble vitamins
- Provides padding to protect vital organs in the body from trauma

- Acts as insulation for body temperature maintenance
- Supplies fatty acids which are needed for normal cells and metabolism and for the normal growth and maintenance of tissue

OBJECTIVE 10 **Distinguish between the characteristics of saturated and unsaturated fats.**

Saturated fats

- Are usually solid at room temperature
- Can also be oily fats that have been converted to solid fats by the addition of hydrogen (hydrogenation)
- Are usually of animal origin, but not always
- Are high in cholesterol if of animal origin
- May contain less essential fatty acids if hydrogen has been added to the product

  NOTE: Essential fatty acids are those that cannot be manufactured by the body.

Unsaturated fats

- Are liquid at room temperature
- Are usually of plant origin, but not always
- Can lower blood cholesterol levels when taken in the diet

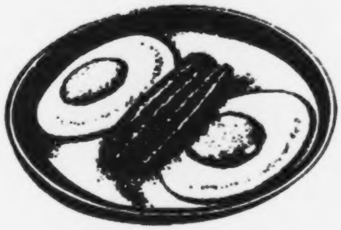
OBJECTIVE 11 **Distinguish between sources of saturated and unsaturated fats.**

Saturated fats

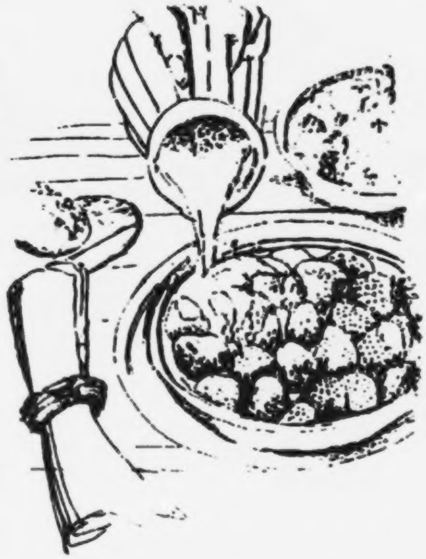
- Animal origin
  - Meat fat
  - Egg yolks
  - Lard
  - Bacon grease
  - Butter
  - Cream from milk
  - Ice cream
  - Whole milk cheese

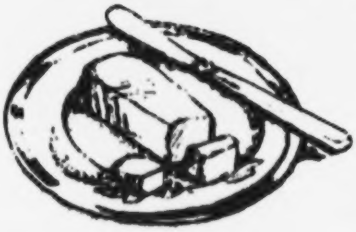
- **Plant origin**
  - Chocolate
  - Coconut and coconut oil
  - Hydrogenated vegetable shortenings

NOTE: Sources of invisible fat include the saturated fats hidden in meat, milk, egg yolk, and chocolate. Invisible fat is not readily detectable by looking at a product.



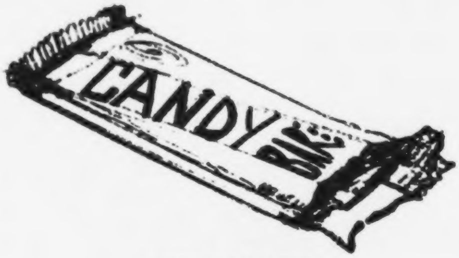
SAUSAGE





BUTTER

STRAWBERRIES AND CREAM



CHOCOLATE

Unsaturated fats

- **Plant origin**
  - Vegetable oils that have not had hydrogen added, such as corn oil, sunflower oil, soybean oil, peanut oil
  - Soft margarine made from vegetable oils
  - Salad dressings made from vegetable oils that have not had hydrogen added
  - Avocados, variety of nuts

  NOTE: Avocados and nuts contain invisible fat.

- **Animal origin**
  - Freshwater fish
  - Some poultry

OBJECTIVE 12 **Identify the characteristics of cholesterol.**

- Is a fat-related substance which is found in fatty foods of animal origin

- Is a normal component of the blood and all body cells, especially brain and nerve tissue

- Is used by the body to help manufacture Vitamin D, adrenal gland hormones, sex hormones, and bile acids

- Is manufactured in the body primarily by the liver from food substances

  NOTE: There are two sources of cholesterol for the body—manufacture by the liver and ingestion of foods.

- High blood levels may contribute to atherosclerosis, a degenerative disease of the arteries, and to disease of the arteries that supplies the heart muscle with blood

OBJECTIVE 13

Distinguish between foods that contain large amounts of cholesterol and those that do not contain cholesterol.

High content of cholesterol

- Shellfish: lobsters, oysters
- Egg yolk
- Organ meats: brains, liver, kidney
- Animal fat
    - Whole milk (which contains cream)
    - Whole milk cheese
    - Butter
    - Lard
    - Bacon
    - Meat fat
    - Baked products containing animal fat

No cholesterol

- Egg whites
- Fruits
- Vegetables

OBJECTIVE 14

Identify the characteristics of triglycerides.

- Are combinations of alcohol and fatty acids
- Are found widely in food fat and body storage fat

  NOTE: Most food fats and adipose tissue are in triglyceride form.

- High blood levels may contribute to atherosclerosis and to disease of the arteries that supply the heart muscle with blood

OBJECTIVE 15

Identify dietary sources of triglycerides.

All fats of animal origin

- Butter
- Whole milk
- Lard

- Bacon

All fats of plant origin

- Avocado
- Vegetable oils
- Nuts
- Olives

OBJECTIVE 16 **Identify the correct percentages of fats, carbohydrates, and proteins that are recommended for the daily diet of a healthy adult.**

Correct percentages of fats, carbohydrates, and proteins that are recommended for the daily diet of the healthy adult:

Carbohydrates—53% of the daily intake of calories

Fats—35% of the daily intake of calories

Proteins—12% of the daily intake of calories

OBJECTIVE 17 **Identify the number of calories in one gram of carbohydrate, protein, and fat.**

Foods vary in the amount of energy they contain. For example, a chocolate malt or candy bar will produce more energy than an apple. When the body metabolizes nutrients to produce energy heat is also released. Three of the seven nutrients contain calories—carbohydrates, proteins, and fats. Both carbohydrates and proteins provide four calories per gram. Fats are a much more concentrated source of energy. They provide nine calories per gram.

Number of calories in one gram of:

Carbohydrates—four calories per gram

Protein—four calories per gram

Fat—nine calories per gram

EXAMPLES

- 1/2 cup orange juice (40 calories)

1/2 cup orange juice	10	grams carbohydrate
(40 calories)	0	grams protein
	0	grams fat

4 calories x 10 grams = 40 calories

- 2 poached eggs (155 calories)

2 poached eggs	0	grams carbohydrate
(155 calories)	14	grams protein
	11	grams fat

4 calories x 14 grams = 56 calories
9 calories x 11 grams = 99 calories
Total 155 calories in 2 eggs

- 1 slice toast (68 calories)

1 slice toast	15	grams carbohydrate
(68 calories)	2	grams protein
	0	grams fat

4 calories x 15 grams = 60 calories
4 calories x 2 grams = 8 calories
Total 68 calories in 1 slice toast

- 1 cup whole milk (152 calories)

1 cup whole milk	12	grams carbohydrate
(152 calories)	8	grams protein
	8	grams fat

4 calories x 12 grams = 48 calories
4 calories x 8 grams = 32 calories
9 calories x 8 grams = 72 calories
Total 152 calories in 1 cup whole milk

- 1 teaspoons margarine (45 calories)

1 teaspoons margarine	0	grams carbohydrate
(45 calories)	0	grams protein
	5	grams fat

9 calories x 5 grams = 45 calories in one teaspoon full of margarine

- 1 teaspoon strawberry jam (56 calories)

1 teaspoon strawberry jam	14	grams carbohydrate
(56 calories)	0	grams protein
	0	grams fat

4 calories x 14 grams = 56 calories in 1 teaspoon of strawberry jam

Total number of calories in a meal consisting of these foods:

orange juice	40
eggs	155
toast	68
milk	152
margarine	45
strawberry jam	56
	516 calories

NOTE: The number of grams of carbohydrates, proteins, and fats that are contained in most of the above listed food items was taken from the Diabetic Exchange List. Other sources you consult may vary slightly from these lists in nutrient and caloric values.

OBJECTIVE 18 **List factors that affect an individual's calorie requirements.**

METABOLISM

All living organisms take in oxygen, use it to burn food for energy and growth, and then excrete the wastes. This process is known as metabolism. During the metabolic process nutrients are used by the cells for building tissue, providing energy, or regulating various body functions.

BASAL METABOLISM

The amount of energy (calories) used by the body when at rest is referred to as basal metabolism. This is measured by the amount of oxygen used or by the amount of energy released. Basal metabolism is the amount of energy needed to sustain life.

FACTORS AFFECTING ENERGY REQUIREMENTS

An individual's calorie requirement is the number of calories needed by the body in a 24-hour period. Calorie requirement varys from person to person, depending on

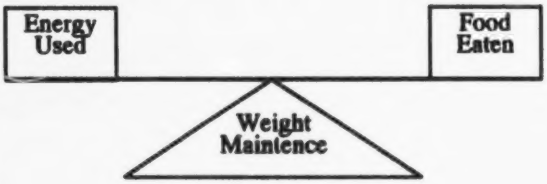
- Amount of physical activity
- Age
- Size
- Sex

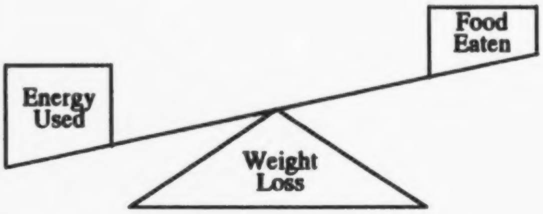
- Physical condition
- Climate

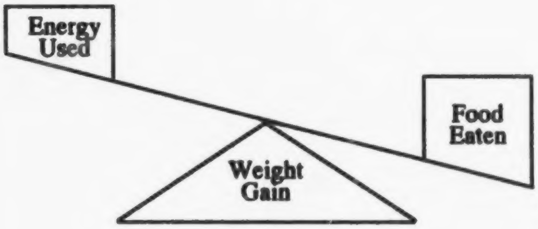
Usually the amount of physical activity or exercise is the main factor determining caloric requirements, since energy used must be replaced.

It is possible that a restricted diet would result in weight gain. Metabolism may actually be slowed down so much that the body responds by conserving energy. An individual who wants to gain weight can decrease activity and increase caloric intake. An individual who wants to lose weight can increase activity and decrease caloric intake.

Calories measure the heat and energy value of foods. When an individual consumes too many calories, the excess energy value of the calories is stored in the body primarily as structural protein and adipose tissue. (In other words, if one eats too much, one gets fat.)


Energy Used
Food Eaten
Weight Maintence


Food Eaten
Energy Used
Weight Loss


Energy Used
Food Eaten
Weight Gain

OBJECTIVE 19

Identify the general characteristics of vitamins and minerals.

- Have no caloric value
- Are essential to life
- Will not relieve a physical illness unless the condition was caused by a lack of that particular vitamin or mineral
- Are provided in sufficient amounts for most people in a well-balanced diet that follows the guidelines of the Basic Four Food Groups
- Can be lost or destroyed through improper storage and cooking

OBJECTIVE 20

Distinguish between the fat-soluble and water-soluble vitamins.

Fat-soluble

- Vitamin A (retinol)
- Vitamin D (calciferol)
- Vitamin E (tocopherol)
- Vitamin K (menadione)

Water-soluble

- Vitamin C
- B-complex vitamin B1 (thiamine)
- B-complex vitamin B2 (riboflavin)
- B-complex vitamin B6 (pyridoxine)
- B-complex vitamin B12 (cobalamin)
- Niacin (nicotinic acid)
- Folic acid

OBJECTIVE 21

Distinguish between characteristics of fat-soluble and Water-soluble

Fat-soluble vitamins

- Can be stored in the body if excess amounts are taken and cause toxic (poisonous) effects
- Are removed from the digestive tract before absorption by the body if mineral oil is taken as a laxative near meal time
- Are not absorbed properly by the digestive tract unless a sufficient amount of fatty foods are included in the diet
- Must be transported to various body sites in blood lipids
- Can be lost in foods when poor storage techniques result in wilting and dehydration of fresh items
- Are not destroyed in foods with ordinary cooking methods

Water-soluble vitamins

- Are usually not stored in the body if excess amounts are taken because they are readily excreted in the urine (Vitamin B12 is the exception to this rule. It is stored in the liver.)
- Can be lost in food when poor storage techniques result in wilting and dehydration of fresh items
- Are easily destroyed in foods by ordinary cooking methods
- Are best preserved in prepared fruits and vegetables by cooking these items in a small amount of boiling water for a short time and by covering the cooking container

  NOTE: Vitamin C is best obtained in the diet from fresh, raw fruits and vegetables.

Vitamin C, one of the water-soluble vitamins, may need to be increased in the diet of cigarette smokers. It is believed that cigarette smoking alters the use of Vitamin C in the body.

OBJECTIVE 22 | **Identify the functions and major sources of selected vitamins.**

VITAMINS	FUNCTIONS	MAJOR SOURCES
Fat-Soluble Vitamins		
Vitamin A (retinol)	Is a component of the visual pigments in the retina of the eyes. These pigments are necessary for dim light vision. Is necessary for maintenance of the epithelial tissue of the skin and mucous membranes. NOTE: Epithelial tissues are those cells that line the outer surface of the body and the body cavities.	Liver, whole milk, cream, butter, cheese, fortified margarine, egg yolk, green and yellow vegetables, yellow fruits.
Vitamin D (calciferol)	Regulates calcium and phosphorus metabolism by assisting in the process of: 1. Intestinal absorption of calcium and phosphorus. 2. The release of calcium and phosphorus from the bone into the blood stream.	Action of sunshine on skin, Vitamin D milk (fortified milk), egg yolks, liver.
Vitamin E (tocopherol)	Helps to stabilize cell membranes, including the membranes of red blood cells. NOTE: It is claimed that Vitamin E is effective in treating burns and heart conditions, improving sexual performance and retarding aging. There is no concrete evidence to support claims such as these.	Vegetable oils, egg yolk NOTE: If vegetable oils are allowed to become rancid, their Vitamin E content is destroyed.
Vitamin K (menadione)	Is essential for normal clotting of the blood, helps in the manufacture of prothrombin (one of the clotting factors).	Manufactured by bacteria in the colon. Green leafy vegetables, liver, cauliflower, cabbage.

VITAMINS	FUNCTIONS	MAJOR SOURCES
Water-Soluble Vitamins		
Vitamin B1 (thiamine)	Is necessary for the release of energy from carbohydrates, fats, and proteins. (Is involved in carbohydrate, fat, and protein metabolism.) Is thought to be involved in the supply of energy to the nervous system.	Whole grain and enriched cereals, pork, legumes, liver. (Legumes are beans, peas, or lentils) **NOTE:** Thiamine can be lost from foods when baking soda is added to the cooking water.
Vitamin B2 (riboflavin)	Is necessary for the release of energy from carbohydrates, fats, and proteins. (Is involved in carbohydrate, fat, and protein metabolism.)	Whole grain and enriched cereals, milk, green leafy vegetables, liver. **NOTE:** When food products are exposed to light, they may lose some riboflavin content.
Vitamin B6 (pyridoxine)	Is involved in protein metabolism and may be involved in the intestinal absorption of amino acids. Is thought to convert amino acids to substances that assist in the transmission of nerve impulses.	Whole grain cereals, meat (especially organ meat), legumes and nuts. **NOTE:** Vitamin B6 is easily destroyed by light.
Vitamin B12 (cobalamin)	Is involved in the production of normal red blood cells in the bone marrow. Is needed for the maintenance of myelin (a white, fatty material that covers some nerve fibers). **NOTE:** In order for vitamin B12 to be properly absorbed from the intestine, an enzyme called the intrinsic factor must be present in the stomach.	Found in animal protein foods—lean meat, organ meats, eggs, dairy products.

VITAMINS	FUNCTIONS	MAJOR SOURCES
Niacin (nicotinic acid)	Is necessary for release of energy from carbohydrates, proteins, and fats. (Is involved in carbohydrate, protein and fat metabolism.)	Enriched breads and cereals, organ meats, legumes, nuts.
Folic Acid	Is involved in the production of normal red blood cells in the bone marrow.	Green leafy vegetables, liver, asparagus, lima beans.
	Helps in the formation and maintenance of collagen (a basic structural protein of the cartilage, bones, teeth, blood vessels, tendons, and skin.)	
Vitamin C (Ascorbic Acid)	Is necessary for wound and tissue healing. Is needed for the proper absorption of iron. Aids in the maintenance of resistance to infection.	Citrus fruits (limes, oranges, lemons), tomatoes, cabbage, potatoes, strawberries. **NOTE:** Vitamin C is the vitamin most easily destroyed in foods.

OBJECTIVE 23

Match the commonly used names of selected vitamins to their chemical names.

Vitamin *Common Name*	**Vitamin** *Chemical Name*
Vitamin A	Retinol
Vitamin B1	Thiamine
Vitamin B2	Riboflavin
Vitamin B6	Pyridoxine
Vitamin B12	Cobalamin
Vitamin C	Ascorbic acid
Vitamin D	Calciferol
Vitamin E	Tocopherol
Vitamin K	Menadione
Niacin	Nicotinic acid

OBJECTIVE 24 **Identify the functions and major sources of selected minerals.**

MINERAL	FUNCTIONS	MAJOR SOURCES
Calcium	Is one of the most important factors in making and maintaining normal bones and teeth. Is involved in muscle contractions and relaxation. **NOTE:** In the absence of calcium, muscles lose their ability to contract. Helps to maintain regular contractions of the heart muscle. Aids in the clotting of the blood. Aids in transmission of nerve impulses.	Milk and milk products, egg yolks, green leafy vegetables.
Iodine	Is a component of several thyroid hormones.	Seafood, iodized salt.
Iron	Is necessary for the formation of hemoglobin (the substance in red blood cells that carries oxygen). **NOTE:** Many pregnant women, premenopausal women, and infants need more iron than is usually available in their food. Usually only 10% of the iron in food may be absorbed. In order to increase the absorption rate, a person should eat animal protein, Vitamin C sources, and foods high in iron in the same meal.	Liver, red meats, egg yolks, nuts, enriched whole grains, legumes.

MINERAL	FUNCTIONS	MAJOR SOURCES
Phosphorus	Necessary for the formation of bones and teeth Aids in the metabolism of fats and carbohydrates Helps carry fatty acids in the bloodstream	Milk, milk products, fish, poultry, legumes
Potassium	Needed for normal action of muscle tissue, especially heart muscle Plays a role in the conduction of nerve impulses Helps to regulate the acid-base balance of the blood Helps to maintain the correct amount of fluid in the body cells Involved in carbohydrate and protein metabolism	Whole grain cereals, dried peas and beans, oranges, bananas, watermelon, fresh fish
Sodium	Very important in maintaining the water volume necessary for the fluid that surrounds the cells Helps to maintain the normal amount of fluid in the bloodstream Helps to maintain the proper acid-base balance in the blood Necessary for proper functioning of nerve and muscle tissue	Table salt, baking powder, baking soda, cheese, processed foods

OBJECTIVE 25

Identify the functions and major sources of fiber.

The functions of fiber

- Is thought to help prevent cancer of the colon
- Is thought to have a possible role in the treatment of diabetes mellitus, high fat blood levels, and some colon diseases
- Draws water into the fecal material of the colon, making it softer

  NOTE: In order for fiber to be effective in softening the individual's stool, the individual must be drinking adequate amounts of fluid.

- Stimulates muscular movement of the walls of the intestines, causing fecal material to be transported through the digestive tract

NOTE: There are different types of fiber. Cellulose, pectin, and gum are some examples.

The principal sources of fiber

- Whole grains and grain products
- Vegetables—raw and unpeeled
- Fruits—raw and unpeeled
- Nuts, seeds, and legumes

NOTE: Most people in the United States do not obtain enough fiber in their diet.

CLINICALLY IMPORTANT MINERALS

Only those minerals that are of the most clinical importance to nurses are mentioned in some detail in your information sheets. However, there are other minerals that are important in the functioning of the human body. Below are listed some of these minerals, their functions, and some of their sources.

Chlorine

Functions—Helps the blood fluid to maintain the proper degree of acidity; is needed for the production of acid by the stomach

Source—Table salt (Table salt is a compound of sodium and chlorine and is sometimes referred to by its chemical name of sodium chloride.)

Copper

Function—Must be present in the body in order for iron to be properly utilized to help make normal red blood cells

Sources—Copper is available in most food, best food sources include grains, organ meats, and dried fruits

Fluoride

Functions—Helps in the formation of sound bones and teeth; plays a role in the prevention of dental decay and osteoporosis (a degeneration in the bones of elderly people)

Sources—Fish and tea are food sources of fluoride, many communities add this mineral to their drinking water

NOTE: Too much fluoride in the water supply can produce brown discolorations on the teeth of persons who are drinking the water.

Magnesium

Function—Needed for the proper transmission of nerve impulses to the muscles of the body

Sources—Meat, seafood, nuts, diary products, whole grains

Selenium

Function—Is needed for the structure of certain enzymes

Sources—Traces found in many foods

NOTE: Some people mistakenly think that selenium is a cure for cystic fibrosis, a disease that affects pediatric patients.

Sulfur	Functions—Aids proteins in performing their functions, is present in the structure of proteins
	Sources—Found in most foods
Zinc	Functions—Involved in helping enzymes and insulin function properly; is required for a normal sense of taste
	Sources—Animal foods such as milk and egg yolks

LABORATORY TESTS COMMONLY USED FOR NUTRITIONAL ASSESSMENT

Serum Cholesterol

Normal blood levels for an adult—150 to 250 milligrams (mg) per 100 milliliters (ml) of blood

Decreased blood level—(below 150 milligrams per 100 milliliters). A decreased blood level may indicate starvation or the inability to absorb nutrients through the gastrointestinal tract. Lowered serum values are sometimes found in diseases which involve hormonal imbalances.

Increased blood level—(above 250 milligrams per 100 milliliters). An increased blood level may indicate that a person is over-consuming animal fat in the diet. Many persons with increased levels are at high risk of developing artery diseases, especially of the arteries that supply the heart muscle with blood.

Total Serum Protein

Normal blood levels for an adult—6 to 8 grams (gm) per 100 milliliters (ml) of blood

Decreased blood level—(below 6 grams per 100 milliliters) A decreased blood level may indicate prolonged malnutrition, starvation, or the inability to absorb nutrients through the gastrointestinal tract. Persons with liver disease, kidney disease, or severe burns may also exhibit low protein blood levels.

Increased blood level—(above 8 grams per 100 milliliters). An elevated protein blood level usually indicates that a person has lost water from the blood stream. The blood becomes very concentrated. Loss of water from the blood occurs because of dehydration, vomiting, and/or diarrhea.

Serum Triglycerides

Normal blood levels for an adult—10 to 190 milligrams (mg) per 100 milliliters (ml) of blood

Decreased blood level—(below 10 milligrams per 100 milliliters) A decreased blood level may indicate hormonal imbalances or protein malnutrition. (Triglycerides are carried to various body sites by blood proteins.) Also, persons who exercise regularly and vigorously may have lowered triglyceride blood levels.

Increased blood level—(above 190 milligrams per 100 milliliters) An increased blood level may indicate many conditions

EXAMPLES: Pregnancy, uncontrolled diabetes mellitus, and liver disease

Many persons with increased blood levels are at high risk of developing artery diseases, especially of the arteries that supply the heart muscle with blood.

NOTE: The student should be aware that many diets and drugs interfere with the results of the above-mentioned tests. The physician will evaluate the patients's health history before determining what interpretation to place upon the laboratory reports. It is also important to note that there will be variations in what different laboratories consider "normal" for various laboratory tests.

THE BASIC FOUR FOOD GROUPS

One of the best guarantees of an adequate diet is including a variety of foods in the meal plan. The Basic Four Good Groups developed by the U.S. Department of Agriculture is a simple, easily remembered plan for choosing these foods.

The Basic Four Good Groups is very adaptable. There are adjustments in the plan that help to make it appropriate not only for adults without special needs but also for children, adolescents, pregnant girls and women, and nursing mothers. Below are listed those servings which would be appropriate for a healthy *adult* who has no special needs.

FOOD GROUPS

Milk Group—2 servings daily

Serving sizes of various foods in the milk group:

1 cup (8 oz.) whole or skim milk

1 1/3 oz. cheddar cheese

1 1/3 cup cottage cheese

1 1/3 cup ice cream

Meat Group—2 or more servings daily

Serving sizes of various foods in the meat group:

2 oz. cheddar cheese—Count cheese as *one* serving of milk or meat, not both at the same time.

2 eggs—Eggs are high in cholesterol. Some persons must limit their consumption of eggs to three a week.

2 oz. of cooked beef, pork, poultry, or fish

1 cup cooked dry beans or peas

4 Tbsp. peanut butter

Bread - Cereal - Potato - Legume Group—4 to 8 servings daily

Serving sizes of various foods in this group:

1 slice bread

1/2 cup white potato

1/4 cup sweet potato

1/3 cup corn

1/2 cup cooked macaroni, noodles, rice, spaghetti, cornmeal, beans, peas or cereal

3/4 cup of dry cereal

Fruit and Vegetable Group—4 to 5 servings daily

Serving sizes of various foods in this group:

1/2 cup cooked fruit or vegetable

1/2 cup fruit or vegetable juice

1 cup raw fruit

1 piece fruit

NOTE: One serving of citrus fruit and one serving of dark green or yellow vegetable should be included on a daily basis.

Iodized salt should be used in certain areas of the country.

The Basic Four Food Groups does not include fats and sweets. These should be used sparingly along with the recommended servings mentioned above to bring the individual's daily calorie intake to the proper level.

ASSIGNMENT SHEET 1

APPLY PRINCIPLES OF BASIC NUTRITION

I

OBJECTIVE 26 **Calculate the caloric value in meals.**

NAME ________________________________ SCORE _______

Directions: Below are listed the foods offered with three meals. Also listed is the carbohydrate, protein, and fat content of each food. Calculate the caloric value of each food and the caloric value of each meal. Show your math calculations on this paper.

Part 1

BREAKFAST

Grapefruit (1)	20	grams carbohydrate
	0	grams protein
	0	grams fat
		Number of calories_____
Cornflakes (3/4 cup)	15	grams carbohydrate
	2	grams protein
	0	grams fat
		Number of calories_____
Hardboiled egg (1)	0	grams carbohydrate
	7	grams protein
	5.5	grams fat
		Number of calories_____
English muffin (1/2)	15	grams carbohydrate
	2	grams protein
	0	grams fat
		Number of calories_____
Skim milk (1 cup)	12	grams carbohydrate
	8	grams protein
	0	grams fat
		Number of calories_____
Coffee (1 cup)	0	grams carbohydrate
	0	grams protein
	0	grams fat
		Number of calories_____
Table sugar (1 Tbsp)	12	grams carbohydrate
	0	grams protein
	0	grams fat
		Number of calories_____

TOTAL NUMBER OF CALORIES FOR BREAKFAST_____

Part 2

LUNCH

Tomato juice (1/2 cup)	5	grams carbohydrate
	2	grams protein
	0	grams fat
		Number of calories ____
Turkey breast (2 oz.)	0	grams carbohydrate
	14	grams protein
	6	grams fat
		Number of calories ____
Whole wheat bread (2 slices)	30	grams carbohydrate
	4	grams protein
	0	grams fat
		Number of calories ____
Potato Chips (10)	10	grams carbohydrate
	1	grams protein
	8	grams fat
		Number of calories ____
Raw peach (1 medium)	10	grams carbohydrate
	0	grams protein
	0	grams fat
		Number of calories ____
Mayonnaise (1 tsp)	0	grams carbohydrate
	0	grams protein
	5	grams fat
		Number of calories ____
Tea (1 glass)	0	grams carbohydrate
	0	grams protein
	0	grams fat
		Number of calories ____

TOTAL NUMBER OF CALORIES FOR LUNCH__________

Part 3

DINNER

Corned beef (2 oz.)	0	grams carbohydrate
	14	grams protein
	11	grams fat
		Number of calories_____
Cabbage (1 cup)	10	grams carbohydrate
	4	grams protein
	0	grams fat
		Number of calories_____
Carrots (1/2 cup)	5	grams carbohydrate
	2	grams protein
	0	grams fat
		Number of calories_____
Cornbread (2"x2"x1" slice)	15	grams carbohydrate
	2	grams protein
	5	grams fat
		Number of calories_____
Butter (1 tsp)	0	grams carbohydrate
	0	grams protein
	5	grams fat
		Number of calories_____
Strawberry ice cream (1 cup)	32	grams carbohydrate
	5	grams protein
	14	grams fat
		Number of calories_____
Water (1 glass)	0	grams carbohydrate
	0	grams protein
	0	grams fat
		Number of calories_____

TOTAL NUMBER OF CALORIES FOR DINNER _________

Part 4 A patient is receiving intravenous fluids. These fluids are the patient's only "meals" since he is to receive nothing by mouth. The intravenous fluid is 5% Dextrose in Water. Each liter of fluid contains 50 grams of glucose (a carbohydrate). The patient is to receive three liters of fluid in 24 hours. How many calories will the patient receive in 24 hours? Show your math calculations on this paper.

NUMBER OF CALORIES RECEIVED IN 24 HOURS_____

Part 5 Place an "X" in the blank next to the meal that is highest in calories.
Show your math calculations on this paper.

____Meal I—person consumes 26 grams of fat, 20 grams of protein, and 88 grams of carbohydrates in the meal

____Meal II—person consumes 28 grams of fat, 18 grams of protein, and 88 grams of carbohydrates in the meal

____Meal III—person consumes 24 grams of fat, 20 grams of protein, and 90 grams of carbohydrates in the meal

ASSIGNMENT SHEET 2

APPLY PRINCIPLES OF BASIC NUTRITION

I

NAME ______________________________ SCORE _______

OBJECTIVE 25

Evaluate menus for nutritional adequacy.
The Basic Four Food Groups is used many times as a simple way to evaluate a diet for nutritional adequacy. Use Supplement 3 as a resource to evaluate the menus printed below. Determine if they provide the essential daily nutrients for a healthy adult without special needs. Answer each question that follows the meal plan.

DAY 1

Breakfast

Orange juice 1/2 cup
Poached eggs (2)
Toast (1 slice) with butter
Whole milk (1 cup)
Strawberry jelly

Lunch

Chef salad (lettuce,
tomatoes, cucumbers,
olives, and 1 1/3 oz. of
cheddar cheese)
Coffee

Dinner

Broiled steak (2 oz. piece)
Mashed potatoes (1/2 cup)
with white gravy
Squash, cooked (1/2 cup)
Cherry gelatin dessert
with 1 cup of banana slices
Iced tea with sugar

DAY 1

1. Does this day's menus meet the guidelines of the Basic Four Good Groups?

   ____

2. If this day's menus do not meet the guidelines of the Basic Four Food Groups, what would you do to improve the menus?

   ____

   ____

   ____

DAY 2

Breakfast

Grapefruit (1)
Broiled breakfast pork chop (2 oz.)
Whole wheat toast (1 slice) with margarine
Coffee
Orange marmalade

Lunch

Fried, battered catfish (2 oz.)
Whole corn (1/3 cup)
Diced beets, cooked (1/2 cup)
Bread (1 slice) with butter
Chocolate ice cream (1 1/3 cup)
Water

Dinner

Tomato juice (1/2 cup)
Turkey sandwich (2 oz. turkey, mayonnaise, 2 slices of whole wheat bread)
Potato chips
Uncooked peach (1)
Tea

DAY 2

1. Does this day's menus meet the guidelines of the Basic Four Food Groups?

   ____

2. If this day's menus do not meet the guidelines of the Basic Four Food Groups, what would you do to improve the menus?

   ____

   ____

   ____

DAY 3

Breakfast

Orange (1)
Oatmeal (1/2 cup)
with brown sugar
Biscuits with butter
Whole milk (1 cup)

Dinner

Melted cheese sandwich
(2 oz. of cheese,
2 slices of bread)
Raw spinach and bacon bits
salad (1 cup)
Baked apple
Iced tea

Lunch

Fruit platter—1 1/3 cup of
cottage cheese, with 1/2 cup
canned peaches and canned
pears
Melba toast
Coffee

DAY 3

1. Does this day's menus meet the guidelines of the Basic Four Food Groups?

   ____

2. If this day's menus do not meet the guidelines of the Basic Four Food Groups, what would you do to improve the menus?

   ____

   ____

   ____

DAY 4

Breakfast

Grapefruit (1/2 cup)
Cornflakes (3/4 cup)
with sugar
Hardboiled eggs (2)
Toast (1 slice)
with margarine
Whole milk (1 cup)
Coffee
Strawberry preserves

Lunch

Barbecued ground beef (2 oz.)
Potato salad (1/2 cup)
Carrot sticks (1 cup)
Hamburger bun (2 slices of bread)
Strawberry ice cream (1 1/2 cup)
Iced tea

Dinner

Apricot nectar (1/2 cup)
Cooked, dried pinto beans
(1 cup)
Tomato, lettuce, and green
onion salad (1 cup)
Flour tortilla (1) with butter
Mineral water

DAY 4

1. Does this day's menus meet the guidelines of the Basic Four Food Groups?

   ____

2. If this day's menus do not meet the guidelines of the Basic Four Food Groups, what would you do to improve the menus?

   ____

   ____

   ____

DAY 5

Breakfast

Cornmeal mush (1/2 cup)
with sugar
Fried eggs (2)
Toast (1 slice)
Whole milk (1 cup)
Coffee
Blueberry jam

Lunch

Chicken and rice casserole
(2 oz. chicken, 1/2 cup rice,
cream sauce)
Sliced green peppers (1 cup)
Dinner roll (1) with butter
Angel food cake with peppermint icing
Iced tea

Dinner

Beef roast (2 oz.)
Candied sweet potatoes
(1/4 cup)
Celery sticks (1 cup)
White bread (1 slice)
with margarine
Whole milk (1 cup)

DAY 5

1. Does this day's menus meet the guidelines of the Basic Four Food Groups?

____

2. If this day's menus do not meet the guidelines of the Basic Four Food Groups, what would you do to improve the menus?

____

____

____

DAY 6

(A STUDENT'S DIET)

The following menus were contributed by a student practical nurse. The listed foods were consumed in a twenty-four hour period.

Breakfast

Fudge and peanut butter cookies (4 Tbsp peanut butter in cookies)
Chocolate milk (1 cup)

Lunch
Deep fried, battered fish (2 oz.)
Fried potatoes (1 cup of potatoes) with catsup
Water

Dinner

Fudge and peanut butter cookies (8 Tbsp. peanut butter in cookies)
Chip snacks with cheese flavor (1/2 large bag)
Water

Snacks

Carbonated beverage (12 oz.)
Chocolate candy bar (1)

DAY 6

1. Does this day's menus meet the guidelines of the Basic Four Food Groups?

   ____

2. If this day's menus do not meet the guidelines of the Basic Four Food Groups, what would you do to improve the menus?

   ____

   ____

   ____

ASSIGNMENT SHEET 1

Part 1

80 calories
68 calories
77.5 calories
68 calories
80 calories
0 calories
48 calories

Total number of calories: 421.5

Part 2

28 calories
110 calories
136 calories
116 calories
40 calories
45 calories
0 calories

Total number of calories: 475

Part 3

155 calories
56 calories
28 calories
113 calories
45 calories
274 calories
0 calories

Total number of calories: 671

Part 4

600 calories

Part 5

Meal II

ASSIGNMENT SHEET 2

DAY 1

1. No
2. Add 2 servings of the Bread-Cereal-Potato-Legume Group

DAY 2

1. No
2. Add 1 serving of the Milk Group; include a dark green or yellow vegetable

DAY 3

1. No
2. Add 1 serving of the Meat Group

DAY 4

1. Yes
2. It meets the requirements

DAY 5

1. No
2. Add 2 servings of the Fruit and Vegetable Group; include a citrus fruit

DAY 6

1. No
2. Add 1 serving of Milk Group; 2 servings of Bread-Cereal-Potato-Legume Group; 4 servings of Fruit and Vegetable Group. Reduce number of "empty" calories (sweets) in the diet drastically. Include citrus fruits and dark green or yellow vegetable

WRITTEN TEST

APPLY PRINCIPLES OF BASIC NUTRITION

I

NAME ______________________ SCORE _______

OBJECTIVE 1

Match terms associated with nutrition to their correct definitions. Write the letter of the correct answer in the blanks provided. Each blank will contain only one letter. There are more terms listed than definitions. (Question is continued on the following page.)

___ 1. A substance stored in the liver and muscles that can be converted rapidly into glucose; storage form of carbohydrates

___ 2. A substance composed of two or more elements or parts

___ 3. A substance that cannot be broken into simpler substances by chemical means

___ 4. A protein that causes or increases the rate of a chemical reaction without being changed itself

___ 5. Groups of cells in the body that store fats

___ 6. Pertaining to or derived from living organisms

___ 7. A unit of measurement that determines the heat or energy value of a food

___ 8. A simple sugar, formed by the breakdown of carbohydrates, that is utilized by the body cells for energy; blood sugar; dextrose

___ 9. Fat-related liquid contained in food fats and in the body fat stores

a. Adipose tissue

b. Amino acids

c. Bushel

d. Calorie

e. Caloric value

f. Cholesterol

g. Compound

h. Element

i. Enriched or Fortified

j. Enzyme

k. Gelatin

l. Glucose

m. Glycerol

n. Glycogen

o. Gram

p. Metabolism

q. Nutrient

r. Organic

___10. All of the physical and chemical processes in an organism by which energy is made available and by which the living matter of cells and tissues is produced, maintained, and destroyed

___11. A metric unit of weight

___12. Used to describe foods that have been improved in nutritive value by the addition of nutrients while the food is being processed

___13. A substance in a food that contributes to the proper functioning and structure of the body

___14. Capable of being dissolved

___15. The building blocks of which proteins are constructed

s. Reinforced or strengthened

t. Saturated

u. Soluble

v. Unsaturated

OBJECTIVE 2

Identify the correct definition for each nutrient. Write the letter of the correct answer in the blanks provided. There is only one correct answer.

____1. What are organic food compounds that are the only source of dietary nitrogen called?

a. Carbohydrates

c. Minerals

c. Proteins

d. Vitamins

____2. Starches and sugars are classified as what nutrient?

a. Carbohydrate

b. Protein

c. Fat

d. Roughage

___ 3. What are the structural and indigestible parts of plants called?

a. Complementary carbohydrate

b. Fiber

c. Elimination food

d. Bran

___ 4. What substance contains hydrogen and oxygen and accounts for at least fifty-five percent of an adult's body weight?

a. Protein

b. Carbohydrate

c. Fat

d. Water

___ 5. The term "lipid" refers to which nutrient?

a. Protein

b. Carbohydrate

c. Fat

d. Mineral

___ 6. Which statement most accurately describes the composition and principal function(s) of vitamins and minerals?

a. Vitamins and minerals contain carbon and can be used as an energy source by the body

b. Vitamins and minerals contain protein substances that protect cells from the destructive changes that may occur during metabolism

c. Vitamins and minerals are composed of elements from all of the nutrients and help to regulate the controlled release of energy by the cells of the body

d. Vitamins and minerals are elements or combinations of elements that help to regulate many body processes

____7. To what is the term "roughage" referring?

a. Fiber

b. Fat

c. Minerals

d. Proteins

____8. Proteins, carbohydrates, and fats contain which of the following?

a. Trace minerals, such as sulfur

b. The elements carbon, hydrogen and oxygen

c. The compounds alcohol and water

d. Alkaline and acid materials

OBJECTIVE 3

Identify the functions of carbohydrates. Write an "X" in the blank before each statement that identifies a function of carbohydrates.

____1. Provide a quick source of energy and fuel for the body

____2. Aid in converting iron to a form that can be more readily absorbed from the gastrointestinal tract

____3. Spare proteins for tissue building and repair

____4. Keep tissue proteins from being broken down by the body for use as an energy source

____5. Help to manufacture hormones

____6. Prevent fats from being inefficiently combined with oxygen to be burned by the body cells for fuel and energy

____7. Provide the only energy source for the central nervous system under normal conditions

____8. Provide lactose (milk sugar)

____9. Help to protect the membranes that line the eyes, the mouth, and the respiratory tract

OBJECTIVE 4

List examples of the principle sources of carbohydrates in the diet.

1. List four examples of plant sources.

____

____

____

____

2. List one example of an animal source. ______________

OBJECTIVE 5

Identify the functions of proteins. Write an "X" in the blank before each statement that identifies a function of protein.

___ 1. Help in producing an enzyme that releases energy from carbohydrates in fats

___ 2. Regulate the actions of potassium

___ 3. Build and repair body tissues

___ 4. Help to maintain a normal amount of fluid in the bloodstream

___ 5. Aid in maintaining a normal acid-base balance of the cells and bloodstream

___ 6. Help in conserving the body's supply of minerals

___ 7. Are used to make body secretions, enzymes, hormones, and milk

___ 8. Combine with the mineral iron to form the hemoglobin in red blood cells

___ 9. Provide resistance to infection

___ 10. Transport some vitamins, minerals, and fats in the blood to various sites

___ 11. Help with normal blood clotting

___ 12. Can be used for heat and energy by the body cells

___ 13. Are necessary for the release of carbon dioxide from the cells

OBJECTIVE 6

Distinguish between the characteristics of a complete and an incomplete protein. Write "C" beside each characteristic that applies to complete proteins. Write an "I" beside each statement that applies to incomplete proteins.

____1. Are found mainly in foods of plant origin

____2. Build and repair tissues

____3. Contain all of the eight amino acids that cannot be produced by the adult body and that must be supplied by the diet

____4. Are found mostly in foods of animal origin

____5. Contain only part of the amino acids that cannot be produced by the human body

____6. Cannot maintain life or support growth by themselves

OBJECTIVE 7

Distinguish between sources of complete and incomplete proteins. Write "C" beside each source of a complete protein. Write an "I" beside each source of an incomplete protein.

____1. Meat

____2. Fish

____3. Beans

____4. Gelatin

____5. Cereals

____6. Nuts

____7. Poultry

____8. Peanuts

____9. Peas

___10. Milk

___11. Cheese

___12. Eggs

OBJECTIVE 8

Discuss the characteristics of complementary proteins. Include three characteristics in the discussion.

____

____

____

____

____

____

____

____

OBJECTIVE 9

Identify the functions of fat. Write an "X" in the blank before each statement that identifies a function of fat.

___ 1. Is a very concentrated source of energy for the body cells

___ 2. Provides all of the substances needed to manufacture the connective tissue of the body

___ 3. Is responsible for the transport of carbohydrates into the body cells

___ 4. Stores energy in certain tissues of the body

___ 5. Slows digestion in the stomach

___ 6. Is needed for the transportation and absorption of the fat-soluble vitamins

___ 7. Provides padding to protect vital organs in the body from trauma

___ 8. Acts as insulation for body temperature maintenance

___ 9. Supplies fatty acids which are needed for normal cells and metabolism and for the normal growth and maintenance of tissue

OBJECTIVE 10

Distinguish between the characteristics of saturated and unsaturated fats. Write an "S" beside each statement that applies to a saturated fat. Write a "U" beside each statement that applies to an unsaturated fat.

____1. Are usually solid at room temperature

____2. Are liquid at room temperature

____3. Are usually of plant origin

____4. Are usually of animal origin

____5. Can be oily fats that have been converted to solid fats by the addition of hydrogen

____6. Can lower blood cholesterol levels when taken in the diet

____7. Are more likely to be high in cholesterol content

OBJECTIVE 11

Distinguish between sources of saturated and unsaturated fats. Below are several menus. Write an "S" in the blank before the menu item that is a source of saturated fat. Write a "U" in the blank before the menu item that is a source of unsaturated fat. Blanks for foods that do not contain fat should be marked with an "X."

Breakfast

____1. Grapefruit

____2. Fried bacon

____3. Hard-boiled eggs

____4. Oatmeal

____5. Whole-wheat toast made with hydrogenated soybean oil

____6. Soft margarine made from vegetable oils

____7. Honey

____8. Whole milk

____9. Coffee

Lunch

__ 10. Baked freshwater fish

__ 11. Potatoes and onion fried in lard

__ 12. Boiled carrots

__ 13. Lettuce and tomato salad with vinegar and sunflower oil dressing

__ 14. Dinner roll made with corn oil

__ 15. Butter

__ 16. Vanilla ice cream

__ 17. Tea

Dinner

__ 18. Broiled hamburger patties

__ 19. Steamed rice

__ 20. Boiled beets

__ 21. Celery sticks

__ 22. Whole milk cheese

__ 23. White bread made with peanut oil

__ 24. Chocolate chip cookies

__ 25. Tea

OBJECTIVE 12

Identify the characteristics of cholesterol. Write an "X" in the blanks before each statement that identifies a characteristic of cholesterol.

___ 1. Is a fat-related substance which is found in fatty foods of animal origin

___ 2. Is necessary for the normal metabolism of protein

___ 3. Is manufactured in the body primarily by the liver from food substances

___ 4. Is used by the body to help manufacture Vitamin D, adrenal gland hormones, sex hormones, and bile acids

____5. Is a normal component of the blood and all body cells, especially brain and nerve tissue

____6. Is known to cause diarrhea and skin diseases in adults if taken in excessive amounts

____7. May contribute to atherosclerosis if blood levels are high

____8. Can cause abnormal blood clotting tendencies

OBJECTIVE 13

Distinguish between foods that contain large amounts of cholesterol and those that do not contain cholesterol. Below are listed menus for the day. Write an "X" in the blank in front of the food(s) high in cholesterol.

Breakfast

____1. Orange juice

____2. Bacon

____3. Poached eggs

____4. Bran cereal

____5. Whole wheat toast made with corn oil

____6. Butter

____7. Sugar

____8. Whole milk

____9. Coffee

Lunch

___10. Broiled liver with onions

___11. Macaroni and tomatoes

___12. Green beans

___13. Whole milk cheese slices

___14. Soft margarine

___15. Strawberries and whipped cream

___16. Tea

Dinner

__ 17. Lobster Newburg

__ 18. Boiled squash

__ 19. Fruit salad in light syrup

__ 20. Lard-fried apple pies

__ 21. Boiled new potatoes with parsley

__ 22. Dinner roll made with peanut oil

__ 23. Mineral water

OBJECTIVE 14

Identify the characteristics of triglycerides. Write an "X" in the blank before each statement that identifies a characteristic of triglycerides.

___ 1. Are essentially the same substances as cholesterol

___ 2. Are combinations of alcohol and fatty acids

___ 3. Are found widely in food fat and body storage fat

___ 4. Can raise blood sugar levels quickly when eaten in large amounts

___ 5. High blood levels may contribute to atherosclerosis and to disease of the arteries that supply the heart muscle with blood

OBJECTIVE 15

Identify dietary sources of triglycerides. Write an "X" in the blank before each food that is a source of triglycerides.

___ 1. Butter

___ 2. Whole milk

___ 3. Lard

___ 4. Bacon

___ 5. Avocado

___ 6. Vegetable oils

___ 7. Nuts

___ 8. Olives

OBJECTIVE 16

Identify the correct percentages of fats, carbohydrates, and proteins that are recommended for the daily diet of a healthy adult. Select the correct percentage from the list below and write it in the correct blank.

Percentages: 12%, 17%, 23%, 27%, 35%, 42%, 53%, 60%

1. Fats________________ %
2. Carbohydrates________ %
3. Proteins_____________ %

OBJECTIVE 17

Identify the number of calories in one gram of carbohydrate, protein, and fat. Write the number of calories in each nutrient in the blank provided.

1. Fats________________
2. Carbohydrates________
3. Proteins_____________

OBJECTIVE 18

List factors that affect an individual's caloric requirements. List five factors.

____

____

____

____

____

OBJECTIVE 19

Identify the general characteristics of vitamins and minerals. Write a "T" in the blank beside each true statement. Write an "F" in the blank beside each false statement.

____ 1. Vitamins and minerals provide calories when they are eaten in foods or taken in pill or capsule forms

____ 2. Vitamins and minerals must be supplied to the human body since they are essential to life

___ 3. Large doses of a specific vitamin or mineral will relieve most physical illnesses.

___ 4. Vitamins and minerals are provided in sufficient amounts in a well-balanced diet

___ 5. Minerals are not easily lost or destroyed during the storage or cooking process

OBJECTIVE 20

Distinguish between fat-soluble and water-soluble vitamins. Write an "FS" in the blank beside each fat-soluble vitamin. Write a "WS" in the blank beside each water-soluble vitamin.

___ 1. Vitamin C

___ 2. Vitamin E

___ 3. Vitamin A

___ 4. Niacin

___ 5. Vitamin B1

___ 6. Vitamin B2

___ 7. Vitamin B6

___ 8. Vitamin B12

___ 9. Vitamin D

___ 10. Folic acid

___ 11. Vitamin K

OBJECTIVE 21

Distinguish between characteristics of fat-soluble and water-soluble vitamins. Write an "FS" in the blank beside each statement that applies to fat-soluble vitamins. Write a "WS" in the blank beside each statement that applies to water-soluble vitamins. One statement will apply to both fat-soluble and water-soluble vitamins.

___ 1. Transported to various body sites in the water of the blood

___ 2. Must be transported to various body sites in blood lipids

___ 3. Are not absorbed properly by the digestive tract unless a sufficient amount of fatty foods are included in the diet

____ 4. Can be lost in food when poor storage techniques result in wilting and dehydration of fresh items

____ 5. Are not destroyed in foods by ordinary cooking methods

____ 6. Are easily destroyed in foods by ordinary cooking methods

____ 7. Are best preserved in prepared fruits and vegetables by cooking these items in a small amount of boiling water for a short time and by covering the cooking container

____ 8. Are removed from the digestive tract before absorption by the body if mineral oil is taken as a laxative near meal time

____ 9. Can be stored in the body if excess amounts are taken and cause toxic effects

____ 10. Are usually not stored in the body if excess amounts are taken because they are readily excreted in the urine

OBJECTIVE 22

Identify the functions and major sources of selected vitamins. Write the letter of the correct answer in the blanks provided.

____ 1. Vitamin B12 and folic acid are necessary to produce which of the following?

a. Normal white blood cells

b. Normal red blood cells

c. Substances that help to clot the blood

d. Antibodies that circulate in the blood

____ 2. Proper wound healing and resistance to infection are important to persons who have had abdominal surgery. Which one of the following vitamins is the most closely associated with wound healing and resistance to infection?

a. Vitamin D

b. Vitamin C

c. Vitamin K

d. Vitamin A

___ 3. Which vitamin is necessary for the maintenance of dim light vision and healthy skin?

a. Vitamin E

b. Vitamin B6

c. Vitamin D

d. Vitamin A

___ 4. Vitamin C is necessary for the proper absorption from the digestive tract of which mineral?

a. Iodine

b. Sodium

c. Iron

d. Potassium

___ 5. Vitamin K is manufactured by bacteria in the colon and is also found in large amounts in which two of the following foods?

a. Liver and green leafy vegetables

b. Vegetable oils and nuts

c. Milk and red meats

d. Whole grain cereals and citrus fruits

___ 6. Which of the following is one of the best sources of Vitamin C?

a. Cheese

b. Legumes

c. Yeast

d. Citrus fruits

____7. Which of the following is one of the best sources of many of the B-complex vitamins?

a. Raw vegetables

b. Fish liver oils

c. Fortified margarine

d. Whole-grain enriched cereals

____8. What vitamin does the action of sunshine on the skin help to manufacture?

a. Vitamin C

b. Vitamin A

c. Vitamin D

d. Vitamin B1

____9. In which of the following will vitamin A be found in large amounts?

a. Yellow fruits and vegetables

b. Starchy root vegetables such as potatoes

c. Beans, peanuts and other legumes

d. Berries and red-meated watermelons

____10. Many of the B-complex vitamins are involved in which process?

a. The metabolism of carbohydrates, proteins, and fats

b. The proper use of minerals by the tissues of the body

c. The manufacture of hormones that affect the reproductive system

d. The transport of nutrients to the cells of the body

__ 11. Which vitamin is necessary for proper clotting of the blood?

a. Vitamin C

b. Niacin

c. Vitamin D

d. Vitamin K

__ 12. For which of the following is vitamin E helpful?

a. Prevention of the effects of aging to the skin

b. Healing damaged tissues of the body

c. Maintaining normal red blood cells

d. Increasing the output of reproductive hormones

__ 13. Which vitamins seem to play the greatest role in the maintenance and functioning of the nervous system tissue?

a. All of the fat-soluble vitamins

b. The B-complex vitamins

c. Vitamin C and vitamin K

d. Folic acid and vitamin A

OBJECTIVE 23

Match the commonly used names of selected vitamins to their chemical names. Write the letter of the correct chemical name in the blanks provided. Every blank will contain one letter. There are more chemical names listed than common names. Not every letter will be used in a blank.

Common Name	*Chemical Name*
____1. Vitamin A	a. Riboflavin
____2. Vitamin B1	b. Nicotinic acid
____3. Vitamin B2	c. Tocopherol
____4. Vitamin B6	d. Calciferol
____5. Vitamin B12	e. Ascorbic acid
____6. Vitamin C	f. Thiamine
____7. Vitamin D	g. Pyridoxine
____8. Vitamin E	h. Menadione
____9. Vitamin K	i. Cobalamin
___10. Niacin	j. Retinol
	k. Biotin
	l. Minim
	m. Spirits

OBJECTIVE 24

Identify the functions and major sources of selected minerals. Write the letter of the correct answer in the blanks provided.

____ 1. Which two minerals are necessary for normal contractions of the heart muscle?

a. Calcium and potassium
b. Iodine and potassium
c. Iodine and phosphorus
d. Iron and phosphorus

___ 2. Which mineral is necessary for the production of thyroid hormones?

   a. Iron
   b. Phosphorus
   c. Iodine
   d. Calcium

___ 3. If a patient needs more potassium in his diet, what foods should he be advised to increase in his diet?

   a. Fruits—oranges, bananas, apricots, and watermelons
   b. Dairy products—cheese and milk
   c. Root vegetables—radishes, potatoes, and turnips
   d. Table salt and foods which contain baking soda

___ 4. Persons who are anemic may not have enough hemoglobin in their red blood cells. What mineral may the person need?

   a. Potassium
   b. Iron
   c. Iodine
   d. Sodium

___ 5. Why are calcium, potassium, and sodium necessary?

   a. For the formation and maintenance of the structural proteins of the blood vessels and skin
   b. For the production of digestive enzymes needed to break down nutrients into simple substances
   c. For the proper transmission of nerve impulses throughout the body
   d. The regulation of the temperature control mechanisms in the central nervous system

___6. What mineral is most noted for its role in the maintenance of the fluid balance in the tissues and bloodstream?

a. Sodium

b. Phosphorus

c. Zinc

d. Calcium

___7. Which of the following is **not** the function of phosphorus? Select the exception.

a. Helping in the formation of bones and teeth

b. Aiding in the metabolism of fats and carbohydrates

c. Carrying fatty acids in the bloodstream

d. Playing a role in the constriction of blood vessels

___8. What is one of the best sources of iodine?

a. Poultry

b. Ocean fish

c. Lean red meat

d. Liver

___9. Which of the following foods are especially high in sodium?

a. Lean red meats and whole-grain cereals

b. Fruits and fruit juices

c. Dairy products and processed foods

d. Potatoes and other root vegetables

OBJECTIVE 25 **Identify the functions and major sources of fiber.** Write the letter of the correct answer in the blanks provided.

___ 1. Why is fiber important in the diet?

- a. It provides many nutrients and calories for the body
- b. It helps in the manufacture of Vitamin K in the intestines
- c. It aids in the muscular movement of the walls of the intestines
- d. It helps in the regulation of protein and fat metabolism

___ 2. What is the major source of fiber in the diet?

- a. Meats and fish
- b. Eggs and gelatin
- c. Dairy products and starches
- d. Fruits and vegetables

NOTICE The following assignment sheets are not part of the written test. If these activities have not been completed, check with your instructor.

OBJECTIVE 26 **Calculate the caloric value of meals.** SCORE _______

OBJECTIVE 27 **Assess menus for nutritional adequacy.** SCORE _______

WRITTEN TEST ANSWERS | APPLY PRINCIPLES OF BASIC NUTRITION | I

OBJECTIVE 1

1. n
2. g
3. h
4. j
5. a
6. r
7. d
8. l
9. m
10. p
11. o
12. i
13. q
14. u
15. b

OBJECTIVE 2

1. c
2. a
3. b
4. d
5. c
6. d
7. a
8. b

OBJECTIVE 3

1, 3, 4, 6, 7, 8

OBJECTIVE 4

Answer must include all of the following:

1. Grains and grain products
   Sugar and sugar products
   Vegetables
   Fruits

2. Milk

OBJECTIVE 5

3, 4, 5, 7, 8, 9, 10, 11, 12

OBJECTIVE 6

1. I
2. C
3. C
4. C
5. I
6. I

OBJECTIVE 7

1. C
2. C
3. I
4. I
5. I
6. I
7. C
8. I
9. I
10. C
11. C
12. C

OBJECTIVE 8

Discussion should include:

- Complementary proteins are incomplete protein foods that can be combined in the diet to provide the amino acids found in complete proteins
- Complementary proteins are proteins that are from vegetable origin
- Complementary proteins can be used by vegetarians to maintain health

OBJECTIVE 9

1, 4, 5, 6, 7, 8, 9

OBJECTIVE 10

1. S
2. U
3. U
4. S
5. S
6. U
7. S

OBJECTIVE 11

1. X
2. S
3. X
4. X
5. S
6. U
7. X
8. S
9. X
10. U
11. S
12. X
13. U
14. U
15. S
16. S
17. X
18. S
19. X
20. X
21. X
22. S
23. U
24. S
25. X

OBJECTIVE 12 1, 3, 4, 5, 7

OBJECTIVE 13 2, 3, 6, 8, 10, 13, 15, 17, 20

OBJECTIVE 14 2, 3, 5

OBJECTIVE 15 1, 2, 3, 4, 5, 6, 7, 8

OBJECTIVE 16

1. Fats—35%
2. Carbohydrates—53%
3. Proteins—12%

OBJECTIVE 17

1. Fats—nine calories per gram
2. Carbohydrates—four calories per gram
3. Proteins—four calories per gram

OBJECTIVE 18

Answer should include five of the following:

- Physical activity
- Age
- Size
- Sex
- Physical condition
- Climate

OBJECTIVE 19

1. F
2. T
3. F
4. T
5. F

OBJECTIVE 20

1. WS
2. FS
3. FS
4. WS
5. WS
6. WS
7. WS
8. WS
9. FS
10. WS
11. FS

OBJECTIVE 21

1. WS
2. FS
3. FS
4. WS, FS
5. FS
6. WS
7. WS
8. FS
9. FS
10. WS

OBJECTIVE 22

1. b
2. b
3. d
4. c
5. a
6. d
7. d
8. c
9. a
10. a
11. d
12. c
13. b

OBJECTIVE 23

1. j
2. f
3. a
4. g
5. i
6. e
7. d
8. c
9. h
10. b

OBJECTIVE 24

1. a
2. c
3. a
4. b
5. c
6. a
7. d
8. b
9. c

OBJECTIVE 25	1. c 2. d
OBJECTIVE 26	Refer to answers to Assignment Sheet 1.
OBJECTIVE 27	Refer to answers to Assignment Sheet 2.

OBJECTIVE SHEET

APPLY PRINCIPLES OF DIET THERAPY

II

INTRODUCTION

The majority of practical nurses are employed in hospitals and nursing homes. In these institutions the practical nurse is involved daily in providing nourishment at the bedside to ill or elderly patients. The LPN must assist the registered nurse and dietician to insure that the patient's consumption of nutrients meets the following criteria.

- The patient should consume an adequate, but not excessive, amount of nutrients.
- The patient's diet should be free of microorganisms and toxins.
- If possible, the food offered should contribute to the patient's recovery or improvement, and it should not deteriorate the patient's physical condition further.
- Nourishments should be delivered in a safe manner to the patient, and physical problems related to improper feeding techniques must be prevented.

You must learn how to recognize that these criteria are being met and must learn how to assist in implementing them. You should also be aware of the physical problems that the patient will have to endure if the criteria are not met.

UNIT OBJECTIVE

After completing this unit, the student should be able to use a knowledge of diet modifications, feeding techniques, variables that affect consumption, and safe food handling practices to implement the nursing process and to ensure that the patient safely receives adequate and therapeutic nourishment. The student will show these competencies by completing assignment sheets, job sheets, practical tests, and written test with a minimum of 85 percent accuracy.

PREREQUISITES

Before studying this unit, the student should have successfully completed Unit I, Apply Principles of Basic Nutrition; be able to relieve airway obstructions using diaphragmatic thrusts; and be able to perform pharyngeal and tracheal suctioning procedures.

SPECIFIC OBJECTIVES

After completing this unit, the student should be able to

1. Match terms associated with nutrition to their definitions.
2. Identify factors that influence food habits.
3. Identify the effects of excessive nutrients in the diet.
4. Identify reasons for the two primary causes of nutritional deficiency.
5. Identify the disorders and assessment data associated with carbohydrate deficiencies.
6. Identify the disorders and assessment data associated with protein deficiencies.
7. Identify the disorders and assessment data associated with deficiencies of selected vitamins.
8. Identify the disorders and assessment data associated with deficiencies of selected minerals.
9. Identify three types of food poisoning.
10. Identify nursing actions that can prevent the transmission of disease-producing organisms or their toxins in foods.
11. Discuss nursing interventions used to increase a patient's intake of food.
12. Discuss nursing interventions for feeding problems due to a disability.
13. Identify the characteristics of selected therapeutic diets.
14. Apply the nursing process to improve a patient's dietary intake. (Assignment Sheet 1)
15. Teach a patient about a therapeutic diet. (Assignment Sheet 2)
16. Demonstrate the ability to
    a. Feed a patient, sighted or blind. (Job Sheet 1)
    b. Feed a patient with dysphagia. (Job Sheet 2)

PREPARATION

- Order materials to supplement unit:
  - Films, videotapes, and other media
  - State diet manual
  - American Heart Association materials on relieving airway obstructions.
- Contact guest speakers.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. Call the guest speaker a day or two before scheduled appearance to confirm the appointment.
- Devise a crossword puzzle which uses the terms in Objective 1.
- Make a poster board that shows special adaptive feeding devices.
- Make bulletin boards which show foods allowed on selected therapeutic diets discussed in this unit. Each "tray" should have at least one item on it that would be inappropriate for that particular diet.
- Have eating utensils, food, and blindfolds available so students can practice feeding each other.

DELIVERY

- Discuss unit objective.

Objective 1

- Discuss terms associated with nutrition.
- Have students work the crossword puzzle which uses the terms in Objective 1.

Objective 2

- Discuss factors that influence food habits.
- Invite students from various regional, religious, and cultural backgrounds to discuss the food practices of their groups.

- Have students bring articles and advertisements from newspapers and magazines that illustrate examples of food misinformation. Discuss these in class.

- Ask a dietician from a nursing home to speak on the ways in which old age alters food habits.

Objective 3

- Discuss the effects of excessive nutrients in the diet.

Objective 4

- Discuss reasons for the two primary causes of nutritional deficiency.

Objectives 5 and 6

- Discuss the disorders and assessment data associated with carbohydrate and protein deficiencies.

Objective 7

- Discuss the disorders and assessment data associated with deficiencies of selected vitamins.

- Show "Vitamin Basics" (Part I).

Objective 8

- Discuss the disorders and assessment data associated with deficiencies of selected minerals.

- Show "Potassium" filmstrip or video cassette.

Objective 9

- Discuss the types of food poisoning.

Objective 10

- Discuss nursing actions that can prevent the transmission of disease-producing organisms or their toxins in foods.

- Show the "ABC's of Food Poisoning."

Objective 11

- Discuss nursing interventions used to increase a patient's intake of food.

Objective 12

- Discuss nursing interventions for feeding problems due to a disability.
- Invite a physical therapist or occupational therapist to speak about special feeding devices and feeding techniques to use with disabled individuals. Ask this person to bring special feeding devices for display.
- Display a poster board that shows special adaptive feeding devices for disabled individuals.

Objective 13

- Discuss the characteristics of selected therapeutic diets.
- Display bulletin boards which show foods allowed on selected therapeutic diets.
- Show mock hospital trays and have students determine which foods would be inappropriate for the selected diets.

Objective 14

- Discuss Assignment Sheet 1.

  Point out that analysis is included as a step in the process but is usually completed by an RN with input from the LPN.
- Complete directions for Assignment Sheet 1.
- Have students work with computer program "Introduction to the Nursing Process" if they have not been previously exposed to this type of nursing management.

Objective 15

- Discuss Assignment Sheet 2.
- Complete Assignment Sheet 2.

Objective 16a

- Discuss Job Sheet 1.

- Have students practice feeding each other.
- Have each student experience being fed while wearing a blindfold.
- Ask students to discuss their feelings about being fed.

Objective 16b

- Discuss Job Sheet 2.
- Review pharyngeal and tracheal suctioning procedures if necessary.
- Review American Heart Association materials on relieving airway obstructions.
- Have students practice relieving airway obstructions on mannequins if necessary.

EVALUATION

Pretest

- Pretest qualifying students.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Practical Test

- Explain to students that they will be asked to demonstrate procedures on the job sheet to complete the practical test.
- Describe the rating scale used on the practical test.
- Reteach and retest as necessary.

Written Test

- Explain to students that they will be asked to demonstrate on the written test the actions listed in the specific objectives.
- Give written test.
- Evaluate students on assignment sheet activities.
- Reteach and retest if necessary.

- Complete appropriate section of competency profiles if applicable.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

- *Potassium*, Available for purchase from: Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth, California 91311. Phone: 818-341-2535
- *The ABC's of Food Poisoning—A Case of Food Poisoning*, *Facts and Myths of Food Poisoning*, and *Prevention of Food Poisoning*. Available for purchase from Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth, California 91311. Phone: 818-341-2535 (Filmstrips with audio cassette)
- *Vitamin Basics*, 35 min. Available for purchase from Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth, California 91311. Phone: 818-341-2535 (VHS video cassette or filmstrip with audio cassette)
- *Vitamins: What Do They Do?* 21 min., 1980 Alfred Higgins Prod., Inc., 9100 Sunset Blvd., Los Angeles, California 90069, 16 mm.
- *The Wellness Revolution Color*, 30 min., 1983, Sunset Films, 625 Market Street, San Francisco, CA 94105 16mm.

NOTE: These media are available on a free-loan basis to Oklahoma teachers from the Oklahoma State Department of Vocational and Technical Education/Resource Center, 1500 West Seventh Ave., Stillwater, Oklahoma 74074. Phone: 800-522-5810.

Computer Software

- "Nourish Check—The Nutritional Analysis Manager," Apple 48K, IBM 64K. Available for purchase from Career Aids, 20417 Nordhoff Street, Dept. RX, Chatsworth, California 91311. Phone: 818-341-2535

UNIT REFERENCES

Publications

- American Heart Association "Choking Pamphlet" order No. 700-1001. Available in Oklahoma from: American Heart Association, Oklahoma Affiliate, Inc., P.O. Box 11376, Oklahoma City, Oklahoma 73136. Phone: 405-521-9838
- Holman, Susan R. *Essentials of Nutrition for the Health Professions.* J.B. Lippincott Company/ Philadelphia, Pennsylvania, 1987.
- Kimmel, Georgia W., ed. *Oklahoma Diet Manual*, 8th ed. Oklahoma Dietary Association/Oklahoma City, Oklahoma, 1987.
- Lewis, Clara Mixon, *Nutrition and Nutritional Therapy in Nursing.* Appleton-Century-Crofts/Norwalk, Connecticut, 1986.
- Sloan, Jamee Reid. *Practical Nursing-Volume 1.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

Computer Software

- "Introduction to the Nursing Process," Apple 48K, IBM 64K. Available for purchase from Nasco, 901 Janesville Ave., Fort Atkinson, Wisconsin 53538 or Nasco West, P.O. Box 3837, 1524 Princeton Ave., Modesto, California 95352. Phone: 1-800-558-9595

PRETEST ANSWERS

APPLY PRINCIPLES OF DIET THERAPY

II

OBJECTIVE 1

1. l
2. a
3. r
4. y
5. x
6. s
7. f
8. w
9. u
10. v
11. i
12. b
13. o
14. h
15. j
16. s
17. d
18. k
19. z
20. c
21. e
22. g
23. aa
24. p
25. m
26. q

OBJECTIVE 2

1, 2, 3, 4, 5, 6, 7, 9, 10, 12

OBJECTIVE 3

1. a
2. c
3. d
4. b
5. c
6. d

OBJECTIVE 4

1. a, b, c, d, e, g
2. a, b, d, f, g

OBJECTIVE 5

1, 2, 5, 7, 8

OBJECTIVE 6

1, 2, 3, 5, 6, 7, 8

OBJECTIVE 7

1. d
2. d
3. b
4. b
5. a
6. c
7. c

OBJECTIVE 8

1. d
2. a
3. c
4. b
5. b

OBJECTIVE 9

2, 3, 4

OBJECTIVE 10

1. b
2. d
3. c
4. a
5. c

OBJECTIVE 11

Situation 1: Answer should include

- Getting an order from the doctor for a humidifier to place in the patient's room
- Providing the patient with artificial saliva
- Encouraging the patient to drink 8 to 12 cups of liquids daily
- Advising the patient to avoid dry foods and to dunk foods in liquids to moisten them

- Using sugar-free hard candies to take away strange tastes
- Encouraging the patient to eat chicken, turkey, fish, cheese or eggs if she complains that red meat does not taste right
- Providing the patient with tart foods to use as seasoning

NOTE: This patient should not be encouraged to use sugar-containing foods because of the restrictions of her diet

Situation 2: Answer should include

- Not serving the patient lumpy foods
- Giving the patient foods which are smooth and soft in consistency
- Advising the patient to try bland, low-fat foods if the physician allows
- Telling the patient not to lie down in bed for two hours after eating
- Giving the patient chilled antacids 1 hour and 3 hours after meals if the physician allows

OBJECTIVE 12 Answers should include

- Anchoring feeding equipment with nonslip mats or suction cups
- Serving finger foods and foods that stick together
- Using tape or foam rubber to make the handles on eating utensils larger

OBJECTIVE 13

1. a
2. d
3. b
4. a
5. d
6. b
7. c
8. c

OBJECTIVE 14 Refer to answers to Assignment Sheet 1.

OBJECTIVE 15 Refer to answers to Assignment Sheet 2.

OBJECTIVE 16 Refer to Practical Tests for Job Sheets 1 and 2.

PRETEST

APPLY PRINCIPLES OF DIET THERAPY

II

NAME ______________________ SCORE ________

OBJECTIVE 1

Match terms associated with nutrition to their definitions. Write the letter of the correct answer in the blank provided.

___ 1. The iron-containing pigment of red blood cells that carries oxygen

___ 2. A deficiency in the number and/or characteristics of red blood cells

___ 3. A lowered blood potassium level

___ 4. Those nourishments prescribed by a physician for the treatment of a disease or the symptoms of a disease

___ 5. A disorder caused by low blood calcium levels which is characterized by muscle tremors and spasmodic muscle contractions

___ 6. An inadequate transfer of nutrients from the intestinal tract into the bloodstream or lymph channels

___ 7. An inflammation of the skin

___ 8. A disease of childhood, characterized by softening of the bones, which results in bowed legs and other skeletal abnormalities

___ 9. Pertaining to the body processes which produce energy and produce, maintain, and destroy the living matter of cells and tissues

___ 10. A condition characterized by a softening of the bones in the adult with resulting deformity, weakness, and pain

a. Anemia
b. Anorexia
c. Atherosclerosis
d. Botulism
e. Dementia
f. Dermatitis
g. Dysphagia
h. Electrolyte
i. Fecal
j. Glossitis
k. Goiter
l. Hemoglobin
m. Hemorrhagic disease of the newborn
n. Hyperglycemia
o. Hyperkalemia
p. Hypernatremia
q. Hypoglycemia
r. Hypokalemia
s. Hyponatremia
t. Malabsorption
u. Metabolic

___11. Pertaining to the waste products discharged from the intestines

___12. A lack of appetite

___13. An elevated blood potassium level

___14. Substances such as potassium and sodium that become electrically charged when dissolved in water

___15. An inflammation of the tongue

___16. A lowered blood sodium level

___17. A disease of the nervous system caused by the toxins of certain bacteria which grow in spoiled food

___18. An enlargement of the thyroid gland

___19. A disease caused by the ingestion of parasitic worms into the gastrointestinal system

___20. A narrowing of arteries caused by deposits of fatty substances and other materials on the linings of the arterial walls

___21. Mental deterioration, especially when due to a physical cause

___22. Difficulty in swallowing

___23. A compound found in the blood and urine that is a product of protein metabolism

___24. An elevated blood sodium level

___25. Excessive bleeding in an infant that is corrected by the administration of vitamin K

___26. A lowered blood (sugar) glucose

v. Osteomalacia

w. Rickets

x. Tetany

y. Therapeutic diet

z. Trichinosis

aa. Urea

OBJECTIVE 2

Identify factors that influence food habits. Write an "X" in the blank beside each factor that influences food habits.

____ 1. Personal income

____ 2. Personal attitudes about foods

____ 3. Age

____ 4. Religious beliefs

____ 5. Availability of food

____ 6. Mobility of the population

____ 7. Region of the country where living

____ 8. Attitudes about personal hygiene

____ 9. Nationality and culture

____ 10. Food misinformation

____ 11. Political beliefs

____ 12. Emotional and physical health status

OBJECTIVE 3

Identify the effects of excessive nutrients in the diet. Write the letter of the correct answer in the blank provided.

____ 1. There is evidence that the excessive intake of fats and proteins in the diet can lead to

   a. heart disease

   b. kidney stones

   c. bowel inactivity

   d. hormone disturbances

____ 2. Tooth and gum disease is most closely related to the excessive intake of

   a. proteins

   b. fats

   c. carbohydrates

   d. minerals

_____3. A person is in danger of liver failure if he greatly exceeds the recommended intake of

a. magnesium or water-soluble vitamins

b. magnesium or fat-soluble vitamins

c. iron or water-soluble vitamins

d. iron or fat-soluble vitamins

_____4. The thyroid gland may cease to function if a person continually consumes too much

a. zinc

b. iodine

c. calcium

d. phosphorus

_____5. High blood pressure may be associated with a chronic over-consumption of

a. niacin

b. chlorine

c. sodium

d. iron

_____6. An excessive amount of potassium in the body could be dangerous because this condition might cause

a. narrowing of the arteries that supply blood to the brain

b. failure of the kidneys to remove toxic wastes from the body

c. inefficiency of the lungs in exchanging oxygen for carbon-dioxide

d. disturbances in the rate and rhythm of the heart

OBJECTIVE 4

Identify reasons for the two primary causes of nutritional deficiency.

1. Write an "X" in the blank beside each reason for an inadequate intake of food.

    ___a. Inappropriate therapeutic diets

    ___b. Emotional disturbances

    ___c. Consumption of nutrient-deficient food

    ___d. Alcoholism

    ___e. Poor food habits

    ___f. Seasonal changes in the climate

    ___g. Anorexia due to disease

    ___h. Anemia

    ___i. Fatigue due to moderate exercise

2. Write an "X" in the blank beside each reason for an inadequate use of ingested food.

    ___a. Faulty absorption in the digestive tract due to poor dietary practice

    ___b. Faulty absorption in the digestive tract due to gastro-intestinal diseases

    ___c. A decrease in the production of the reproductive hormones

    ___d. Food allergies and intolerances

    ___e. Food preferences

    ___f. Metabolic disturbances

    ___g. Reduced manufacture of vitamins in the intestinal tract following oral antibiotic therapy

    ___h. A rapid gain in body weight

OBJECTIVE 5

Identify the disorders and assessment data associated with carbohydrate deficiencies. Write an "X" in the blank before the disorders or assessment data associated with a carbohydrate deficiency.

_____1. Lack of glucose for use by the body cells

_____2. Mental and emotional changes

_____3. Skin infections

_____4. Sore and bleeding gums

_____5. Presence of strong acids called ketones in the blood and urine

_____6. Diarrhea

_____7. Fatigue and weakness

_____8. Loss of weight and muscle wasting

_____9. Excessive skin pigmentation

OBJECTIVE 6

Identify the disorders and assessment data associated with protein deficiencies. Write an "X" in the blank before the disorders and assessment data associated with protein deficiencies.

_____1. Anemia

_____2. Edema in the tissues

_____3. Weakness

_____4. Convulsions

_____5. Retarded wound healing

_____6. Growth failure

_____7. Weight loss and muscle wasting

_____8. Lowered resistance to infection

_____9. Excessive production of intestinal gas

____10. Paralysis of the muscles

OBJECTIVE 7 **Identify the disorders and assessment data associated with deficiencies of selected vitamins.** Write the letter of the correct answer in the blank provided.

____ 1. A deficiency of which water-soluble vitamins can lead to various types of anemias?

a. Vitamins B_1, B_2, and B_6

b. Vitamins K, B_1, and folic acid

c. Vitamins C, B_{12}, and niacin

d. Vitamins B_6, B_{12}, and folic acid

____ 2. A deficiency of many of the B-complex vitamins will affect the

a. urinary system (kidney stones, urinary tract infections, kidney failure)

b. skeletal system (joint pains and deformities, easily fractured bones)

c. respiratory system (frequent respiratory infections, attacks of shortness of breath)

d. nervous system (nerve pains, paralysis, and numbness of the extremities, confusion)

____ 3. Rickets is a disease affecting children who have a deficiency of

a. vitamin C

b. vitamin D

c. vitamin A

d. vitamin E

____ 4. Persons who are deficient in Vitamin K will have

a. decreases in hormone production

b. slow clotting of the blood

c. disturbances in nutrient absorption

d. frequent urinary tract infections

_____5. What physical evidence might suggest a patient's diet is defficient in Vitamin A?

a. Dry, hardened skin and mucous membranes

b. Malformed teeth

c. Excessive hair growth

d. Muscle wasting

_____6. Night blindness can be due to a dietary deficiency of

a. vitamin D

b. vitamin B_6

c. vitamin A

d. vitamin K

_____7. A lack of vitamin C in the diet will produce

a. diarrhea, dermatitis, and dementia

b. muscle weaknesses, abdominal distention, and dizziness

c. aching joints, bleeding gums, and bruises on the skin

d. fatigue, weight loss, and muscle cramps

OBJECTIVE 8

Identify the disorders and assessment data associated with deficiencies of selected minerals. Write the letter of the correct answer in the blank provided.

_____1. A patient has been taking a diuretic for a long period of time. Which of the following statements would alert the nurse to a possible potassium deficiency caused by the diuretic?

a. "My skin gets infected easily these days and it tears frequently."

b. "My eyes hurt when I'm in the light and they feel irritated."

c. "I feel so terribly nervous—like I'm jumping out of my skin."

d. "Every now and then my heart feels like it is skipping beats."

____ 2. A deficiency of iron in the diet will cause

a. anemia

b. dermatitis

c. visual defects

d. osteomalacia

____ 3. The patient suffering from a sodium deficiency may complain to the nurse

a. "I didn't sleep well last night. I heard every noise in the hall."

b. "I think I gain weight every day. My legs are full of fluid."

c. "I can't walk today. I feel weak and I'm having muscle cramps."

d. "I can't eat today. Everything tastes like metal or spoiled meat."

____ 4. Too little iodine in the diet can cause a person to develop a/an

a. ulcer

b. goiter

c. tumor

d. cyst

____ 5. Children who have a deficiency of calcium may develop

a. scurvy

b. rickets

c. dermatitis

d. asthma

OBJECTIVE 9 **Identify three types of food poisoning.** Write an "X" in the blank beside each type of food poisoning.

_____1. Poisons that enter foods as the foods are being absorbed by the digestive tract

_____2. Chemicals that are added to foods

_____3. Poisons found in foods in their natural state

_____4. Disease-producing organisms or their toxins in foods

OBJECTIVE 10 **Identify the nursing actions that can prevent the transmission of disease-producing organisms or their toxins in foods.** Write the letter of the correct answer in the blank provided.

_____1. Which food should the nurse make certain is thoroughly cooked to prevent the spread of trichinosis?

a. Cheese and milk dishes

b. Pork and pork products

c. Mushrooms gathered from the outdoors

d. Dried beans exposed to moisture

_____2. A nurse is preparing a bedtime snack of canned soup for a patient. She notices that the ends of the can are swollen. The nurse should

a. boil the soup for five minutes before serving it to the patient

b. taste the soup for spoilage before heating and serving it

c. check the soup for air bubbles before heating and serving it

d. prepare some other nutritious snack for the patient

____ 3. A nurse concerned about the prevention of Hepatitis A transmission to patients should take precautionary measures and

a. report any evidence of houseflies or rats in the institution

b. avoid serving the patient rewarmed meat or milk dishes

c. wash hands thoroughly after using the toilet facilities

d. discourage personnel with respiratory infections from feeding patients

____ 4. To avoid bacterial contamination of liquid nutritional supplements the nurse should

a. promptly refrigerate the liquid supplement after opening it

b. warm the liquid slowly and carefully before serving it

c. add antibiotics to the liquid before storing it

d. boil and strain the supplement after opening it

____ 5. A malnourished patient requests a milkshake which contains a beaten, raw egg. The nurse should explain to the patient that eating raw eggs

a. is an excellent and safe method of obtaining essential nutrients

b. exposes the patient to the dangers of heavy metal contamination

c. puts the patient at risk of developing a bacterial infection

d. is dangerous when the eggs are combined with uncooked milk

OBJECTIVE 11

Discuss nursing interventions used to increase a patient's intake of food. Below are two patient situations that might be encountered by the nurse. Discuss nursing interventions to be used in each situation. Make your answers as complete as possible.

Situation 1: Mrs. Fuentes is being treated for an irritable bowel syndrome with a gastrointestinal anticholinergic drug. This drug has actions which cause Mrs. Fuentes to complain of a dry mouth and a "funny taste to the food." She will not eat. Her doctor has ordered a special diet for this patient. She is to have no "concentrated sweets"—foods which contain a large amount of table sugar. She is allowed as much fluid during the day as she desires.

Situation 2: Mr. Watkins has a hyperactive gag reflex. He also has problems with heartburn after eating. He will take very little orally because of these problems.

OBJECTIVE 12

Discuss nursing interventions for feeding problems due to a disability. Below is a patient situation. Discuss solutions to feeding problems due to a disability that might be used in this situation. Make your answer as complete as possible.

Situation 1: Mrs. Everett has a neurological disease. The symptoms are partially controlled by medication. However, Mrs. Everett has poor coordination and difficulty in grasping objects. She wants to help feed herself.

OBJECTIVE 13

Identify the characteristics of selected therapeutic diets. Write the letter of the correct answer in the blank provided.

____ 1. A patient is on a clear liquid diet. Which of the following foods would be allowed on a clear liquid diet?

a. Grape popsicle, beef bullion, apple juice

b. Strained cooked cereal, sherbet, and coffee

c. Cream of tomato soup, gelatin, and tea

d. Mineral water, custard, and cocoa

____ 2. Many times, a clear liquid diet is ordered for a person who has a disorder of the

a. nervous system

b. urinary tract

c. respiratory tract

d. digestive tract

_____3. Which of the following meals meets the specifications for a full liquid diet?

a. Bananas, broiled squash, and custard

b. Cream of tomato soup, chocolate ice cream, and coffee

c. Chopped sweet potatoes, ground beef, and tea

d. Cottage cheese, custard, and milk

_____4. All of the diets below can be used for a person who has difficulty in chewing. Which one would be *least* nutritionally adequate for long-term use?

a. Clear liquid diet

b. Full liquid diet

c. Pureed diet

d. Edentulous diet

_____5. A pureed diet is prepared for consumption by

a. mixing the food with liquid tenderizers

b. squeezing the juice from foods and discarding it

c. adding digestive enzymes to the food

d. chopping the food and running it through a sieve

_____6. In most institutions, patients whose conditions do not require dietary modifications receive a diet called the

a. selective diet

b. regular diet

c. balanced diet

d. non-restrictive diet

____ 7. When a tonsillectomy patient recovers from anesthesia, and tells the nurse that he/she is thirsty; which juice would be most appropriate to offer if the patient is not nauseated?

a. Cranberry juice

b. Grape juice

c. Apple juice

d. Orange juice

____ 8. When the patient is served the first few meals after a tonsillectomy, which apparatus is usually not allowed?

a. A teaspoon

b. A plastic glass

c. A drinking straw

d. A shallow soup bowl

NOTICE In addition to the pretest items, the student will be required to demonstrate mastery of the following objectives.

OBJECTIVE 14 **Apply the nursing process to improve patient's dietary intake.** SCORE ____

OBJECTIVE 15 **Teach a patient about a therapeutic diet.** SCORE ____

OBJECTIVE 16 **Demonstrate ability to:**

a. Feed a patient, sighted or blind. RATING ___

b. Feed a patient with dysphagia. RATING ___

OBJECTIVE 1 **Match terms associated with nutrition to their definitions.**

- **Anemia**—A deficiency in the number and/or characteristics of red blood cells
- **Anorexia**—A lack of appetite
- **Atherosclerosis**—A narrowing of arteries caused by deposits of fatty substances and other materials on the linings of the arterial walls
- **Botulism**—A disease of the nervous system caused by the toxins of certain bacteria that grow in spoiled foods
- **Dementia**—Mental deterioration, that is primarily due to a physical ailment
- **Dermatitis**—An inflammation of the skin
- **Dysphagia**—Difficulty in swallowing
- **Electrolyte**—Substances such as potassium and sodium that become electrically charged when dissolved in water
- **Fecal**—Pertaining to the waste products discharged from the intestines
- **Glossitis**—An inflammation of the tongue
- **Goiter**—An enlargement of the thyroid gland
- **Hemoglobin**—The iron-containing pigment of red blood cells that carries oxygen
- **Hemorrhagic disease of the newborn**—Excessive bleeding in the newborn that is corrected by the administration of vitamin K
- **Hyperglycemia**—An elevated blood (sugar) glucose
- **Hyperkalemia**—An elevated blood potassium level
- **Hypernatremia**—An elevated blood sodium level
- **Hypoglycemia**—A lowered blood (sugar) glucose

- **Hypokalemia**—A lowered blood potassium level
- **Hyponatremia**—A lowered blood sodium level
- **Malabsorption**—An inadequate transfer of nutrients from the intestinal tract into the bloodstream or lymph channels
- **Metabolic**—Pertaining to the body processes that produce energy and produce, maintain, and destroy the living matter of cells and tissues
- **Osteomalacia**—A condition characterized by a softening of the bones in the adult resulting in deformity, weakness, and pain
- **Rickets**—A childhood disease characterized by softening of the bones resulting in bowed legs and other skeletal abnormalities
- **Tetany**—A disorder caused by low blood calcium levels and characterized by muscle tremors and spasmodic muscle contractions
- **Therapeutic diet**—Nourishments prescribed by a physician for the treatment of a disease or the lessening of symptoms of a disease
- **Trichinosis**—A disease caused by the ingestion of parasitic worms into the gastrointestinal system
- **Urea**—A compound found in the blood and urine that is a product of protein metabolism

OBJECTIVE 2 **Identify factors that influence food habits.**

Identifying factors that influence food habits is an important part of collecting assessment data. If you know that a patient dislikes a particular food, or because of religious practices will not eat or drink certain foods, problems can be avoided and appropriate substitutes planned.

Personal attitudes

- Childhood training and experiences

  EXAMPLE: A child forced to eat spinach may avoid eating it as an adult.

- Food preferences of family and friends

  EXAMPLE: Teenagers are influenced by their peer groups to eat certain foods.

- The method of preparing the food

  EXAMPLE: Persons who hate stewed okra will often eat fried okra.

- Education and travel

  EXAMPLE: A person who travels during college or while in the military service may acquire a taste for foods that were not eaten during high school years.

Region and availability

- Persons cannot consume foods that are not readily available to them

  EXAMPLE: Most West Texans do not eat papayas or mangoes because these fruits are not grown in the region

- Many foods are characteristic of a certain region

  EXAMPLE: Pork parts rarely served anywhere else in the United States are consumed in the South. These parts include the pig's intestines (chitterlings) and its feet.

- Income

  EXAMPLE: Some elderly persons with reduced incomes are not receiving adequate nutrition because they cannot afford to purchase expensive complete protein foods.

Age

- Alters a person's emotional response to the consumption of nutrients

  EXAMPLES: Adolescent girls are frequently confused and troubled about their bodies and will try crash diets in order to lose weight. Also, lonely, elderly widows will not prepare the same quality of meals that they did when their husbands were alive.

- Alters a person's physical condition so that the person no longer wants to consume or is unable to consume the same foods eaten in the past

  EXAMPLES: The digestive enzyme lactose, which assists in the digestion of milk sugar, is much more active in infants than in adults. Many persons who could tolerate milk as infants can no longer tolerate it as adults because of this fact. Also, many elderly persons have lost part of their ability to taste and smell. This leads to a decreased appetite.

Religious influence

- Seventh-Day Adventists—This group is committed to a philosophy of healthful living. They do not eat meat, but will eat some animal foods, such as milk and eggs.
- Mormons (The Church of Jesus Christ of Latter-Day Saints)—This group prohibits the use of tobacco and alcohol and forbids the use of tea and coffee.
- Muslims (Islamic religion)—This group forbids the use of such animal foods as pork, animal shortening, and gelatin, and discourages the use of alcohol, tea, and coffee. They also prohibit the use of animal meat unless the animals are slaughtered according to prescribed ritual.
- Orthodox Jews—This group prohibits the use of animal blood, pork, and fish without fins or scales. They require that meats and poultry be slaughtered and processed according to a prescribed ritual. Meat and dairy products cannot be served at the same meal, and separate utensils and dishes must be used to prepare and serve meat and milk dishes.

  NOTE: Not all Jewish peoples follow Orthodox practices.

Food misinformation

- The use of nutritionally inadequate fad diets can seriously alter body metabolism
- Expensive "health foods" may not be worth the money spent on them
- There may be a reliance on foods or vitamins and minerals to cure a health problem that is best treated by other methods

Nationality and culture

EXAMPLES: People of Mexican-American heritage may have a traditional diet based largely on these plant foods: chili peppers, corn, and dried beans. They may consume less animal proteins than other groups.

Italian-Americans include bread and pasta as an important part of the diet. Olive oil is widely used by this group for cooking and seasoning.

Mass communication

- This factor is affecting food habits by exposing persons to new food habits through advertisements, magazine articles, and food programs on radio and television

Mobility of the population

- This factor enables the spread of ethnic and regional food habits more rapidly

  NOTE: The dietary habits of national and regional groups in the U.S. are rapidly becoming more like each others. In years to come, there may be a "typical" American diet in every part of the country.

Health status—both emotional and physical

EXAMPLES: Anorexia nervosa is a psychological disorder found chiefly in female adolescents. It is a type of self-induced starvation. Persons suffering from emphysema, a lung disease causing shortness of breath, lack the energy to prepare proper meals, and therefore suffer from malnutrition.

OBJECTIVE 3 **Identify the effects of excessive nutrients in the diet.**

Excessive carbohydrates

The consumption of empty-calorie foods that satisfy hunger may prevent a person from eating other foods that are richer in essential nutrients. Many empty-calorie foods, such as soft drinks and other products containing refined sugar, have a high content of simple carbohydrates.

- An increased incidence of tooth and gum disease
- Obesity
- Irritation of the gastrointestinal tract
- Depression of the appetite

Excessive fats

- Obesity
- Decreased digestion and absorption of food products, including calcium
- Increased risk of brain damage, heart disease, diabetes mellitus, and kidney failure

Excessive proteins

- Excessive calcium losses through the kidneys
- Possible increased risk of heart and blood vessel disease

Excessive intake of fat-soluble vitamins

- Gastrointestinal disturbances
- Damage to soft organs such as the kidneys and liver
- Kidney stones

Excessive intake of minerals

- **Iron**—Tissue damage to the heart and liver
- **Iodine**—Suppression of the functions of the thyroid gland
- **Sodium (hypernatremia)**—A fluid overload in the tissues and bloodstream; possibly high blood pressure in chronic sodium excess

- **Potassium (hyperkalemia)**—Disturbances in the rate and rhythm of the heart

OBJECTIVE 4

Identify reasons for the two primary causes of nutritional deficiency.

The two primary causes of nutritional deficiency are an inadequate intake and an inadequate use of ingested foods.

Inadequate intake caused by

- Poor food habits
- Consumption of nutrient-deficient food

  EXAMPLE: While being processed for consumption, some foods have essential nutrients removed from them. This is especially true of grain products used for cereals or bread.

- Anorexia due to disease—anorexia is a symptom of many diseases
- Alcoholism—alcoholics usually do not have an adequate intake of food because of the appetite depressing effects of alcohol and because alcohol causes an inflammation of the stomach lining
- Inappropriate therapeutic diets
- Lack of proper food because of poverty
- Emotional disturbances

Inadequate use of ingested food caused by

- Faulty absorption in the digestive tract due to poor dietary practices

  EXAMPLE: Due to an excessive use of mineral oil, a person may absorb fat-soluble vitamins poorly.

- Faulty absorption in the digestive tract due to gastrointestinal diseases

  EXAMPLE: Crohn's disease (regional enteritis) leads to the malabsorption of nutrients because of disease-produced changes in the structures which absorb the nutrients from the small intestines. Also, nutrients are not absorbed properly when a person has Crohn's disease because of the diarrhea associated with this disorder. When a person has diarrhea, nutrients are rapidly moved through the gastrointestinal tract and absorption time is diminished.

- Food allergies and intolerance—Common foods that can cause allergic symptoms, including diarrhea, in individuals include nuts, peanuts, eggs, cow's milk, wheat, fish, chicken, and chocolate. Some adults have an intolerance to milk because the are deficient in an enzyme that is necessary for the digestion of lactose (milk sugar)

- Metabolic disturbances

  EXAMPLE: In diabetes mellitus, a simple sugar, glucose, is absorbed properly from the gastrointestinal tract into the bloodstream. However, the body cells cannot use the glucose to produce energy because a lack of the hormone insulin prevents the transport of the glucose into body cells.

- Reduced manufacture of vitamins in the intestinal tract following oral antibiotic therapy—some vitamin K is manufactured by bacteria in the intestinal tract

OBJECTIVE 5 **Identify the disorders and assessment data associated with carbohydrate deficiencies.**

- Loss of weight and muscle wasting
- Lack of glucose for use by the body cells, causes fatigue and weakness
- Presence of strong acids called ketones in the blood and urine
- Mental and emotional changes due to a lack of glucose to supply the central nervous system

OBJECTIVE 6 **Identify the disorders and assessment data associated with protein deficiencies.**

- Weakness
- Weight loss and muscle wasting
- Lowered resistance to infection
- Retarded wound healing
- Growth failure
- Anemia
- Edema in the tissues—In protein deficiency there is a reduced level of the protein albumin in the bloodstream. Albumin holds water in the bloodstream and if the blood level of this substance is decreased, fluid escapes from the blood into the tissues

OBJECTIVE 7 **Identify the disorders and assessment data associated with deficiencies of selected vitamins.**

Vitamin A

- Night blindness
- Shrinking and hardening of skin and mucous membranes

Vitamin D

- Rickets (in children)
- Osteomalacia (in adults)
- Tetany (because of poor calcium absorption)

Vitamin K

- Bruising
- Abnormal blood clotting
- Hemorrhagic disease in the newborn

Vitamin B_1 (Thiamine)

A thiamine deficiency is called beriberi. It occurs most frequently in alcoholics and persons with kidney diseases.

- Fatigue
- Weight loss
- Muscle cramps and nerve pains
- Irritability
- Possible paralysis of the legs
- Cardiac failure

Vitamin B_2 (Riboflavin)

- Cracking and sores at the corners of the mouth
- Eye sensitivity and visual defects

Vitamin B_6 (Pyridoxine)

Individuals taking the medication isoniazid (INH) as a treatment for tuberculosis may become deficient in vitamin B_6.

- Anemia
- Irritability and confusion
- Convulsions

Vitamin B_{12} (Cobalamin)

Pernicious anemia is the deficiency disease associated with vitamin B_{12}. Pernicious anemia is due to the underproduction of the intrinsic factor in the stomach. Intrinsic factor is necessary for the absorption of vitamin B_{12}. Elderly people often lose the ability to produce the intrinsic factor.

- Anemia
- Glossitis
- Weak, numb, and tingling extremities due to nerve damage

Folic acid

- Anemia
- Glossitis

Niacin

Pellagra is the deficiency disease associated with niacin. It is not commonly seen in the United States. In the past, it has been called the "3-D disease" because of the disorders and symptoms mentioned below which begin with the letter "d."

- Diarrhea
- Dermatitis
- Dementia

Vitamin C

The deficiency disease associated with a lack of vitamin C is scurvy.

- Sore and bleeding gums
- Stiff, aching joints
- Tendency to bruise easily
- Susceptibility to infection

OBJECTIVE 8 **Identify the disorders and assessment data associated with deficiencies of selected minerals.**

Calcium

- Rickets in children
- Osteomalacia in adults
- Malformed or decaying teeth
- Slow clotting of the blood
- Tetany
- Disturbances in the rate and rhythm of the heart

Iodine

- Goiter
- A decrease in the production of thyroid hormones

Iron

- Iron deficiency anemia
- Lack of red blood cells in the circulating blood

Potassium (hypokalemia)

A common cause of potassium deficiency is the use of diuretics, a class of drugs that increase the secretion of urine.

- Disturbances in the cardiac rate and rhythm
- Muscle weaknesses
- Abdominal distention due to paralyzed muscles in the digestive tract
- Dizziness
- Mental confusion

Sodium (hyponatremia)

- Weakness
- Nerve disorders
- Loss of weight due to water loss
- Muscle cramps

OBJECTIVE 9 **Identify three types of food poisoning.**

- Poisons found in foods in their natural state

  EXAMPLE: Poisonous mushrooms

- Chemicals added to foods

  EXAMPLES: Insecticides used to spray growing fruits and vegetables, or to spray homes

- Disease-producing organisms or their toxins in foods

  EXAMPLES: Type A hepatitis virus in contaminated drinking water or food; the toxins (or poisons) produced by the bacteria that causes botulism in improperly canned foods.

OBJECTIVE 10

Identify nursing actions that can prevent the transmission of disease-producing organisms or their toxins in foods.

Sanitation

- Washing the hands between feeding patients, including infants—Bacterial and viral food poisonings can be transmitted from patient to patient while feeding them.
- Using gloves before and washing the hands thoroughly after handling the fecal material of all patients—The hepatitis A virus, salmonella, and staphylococcal bacterial infections can be transmitted through contaminated bowel movements. Pin worms can also be transmitted in the same manner.
- Proper cleansing of the hands after using toilet facilities—The type A hepatitis virus can be transmitted to food by hands that are soiled with contaminated fecal material.
- Promptly reporting evidence of houseflies or rats in patient-care and food-preparation areas—The bacterium that causes salmonella food poisoning can be transmitted into food by rat fecal material and houseflies.

Avoidance of direct patient care when ill

- Avoiding direct patient care and handling of food when a victim of an infectious illness.

  EXAMPLES: Staphylococcal bacterial food poisoning can be caused by transmission from the skin and respiratory tract of infected food handlers.

  The hepatitis A virus can be transmitted by an infected nurse.

Prevention of food poisoning

- Promptly refrigerating all opened or freshly mixed infant formulas, commercial or blenderized tube feedings, and liquid nutritional supplements—staphylococcal bacteria can multiply rapidly in this type of food.

- Not allowing liquids of the above-mentioned type to sit unrefrigerated in a patient's room.
- Not allowing meat, bakery products, and milk to sit unrefrigerated in a patient's room after meal trays have been collected—Staphylococcal bacteria can multiply rapidly in unrefrigerated foods of the above-mentioned type.
- Refusing to serve eggs, poultry, pork, and beef that does not appear to be well-cooked—Salmonella bacteria can be transmitted by raw eggs or by improperly cooked poultry, pork, or beef. Tapeworms and worms causing trichinosis can be transmitted through undercooked pork and other meats.
- Taking precautions not to serve contaminated canned goods to patients. You should follow these rules in regards to canned goods:
  - Never serve foods from a glass container or a can if the lid or ends are swollen.
  - When opening a container, if the food is forcefully expelled, do not taste the food, and do not serve the food.
  - If, after opening a can, its contents look or smell bad, do not taste the food and do not serve it.
  - Do not allow visitors or families to feed patients from suspect home-canned foods. The bacterium Clostridium botulinum, which is often found in improperly canned foods, produces a powerful toxin which can cause botulism. Botulism can lead to respiratory paralysis and death.

OBJECTIVE 11

Discuss nursing interventions used to increase a patient's intake of food.

For all patients in general

- Make provisions for the patient to void and/or defecate prior to the meal
- Wash the patient's hands and provide for mouth care before the meal is served
- Assist patient to sit up in a chair if possible, or if patient needs to remain in bed, elevate the patient to a sitting position and position overbed table for the patients convenience

- Provide an environment during mealtimes that is as free as possible of unpleasant sights and odors
- Avoid unnecessary interruptions, such as giving treatments or medications during meal time
- Consult the physician in regard to any needed diet changes
- Help the patient as needed with cutting food, buttering bread, and pouring beverages. Allow the patient to do as much as possible. Feed the patient only if necessary
- Place the food and communication device so they are easily reached
- Allow the patient ample time to eat
- If the patient does not eat, try to determine why the food was not eaten
- If the patient has a poor appetite, serve small, frequent meals
- Don't insist that a patient eat
- Prevent constipation

For the patient who will not eat due to persistent nausea

- Feed the patient small meals frequently
- Have the patient chew thoroughly and slowly
- Administer prescribed antiemetics (drugs that combat nausea and vomiting) thirty minutes to one hour before the meals are served
- Advise the patient to avoid drinking liquids at mealtimes
- Try serving the patient room temperature or cold foods during meals
- If allowed by the physician, advise the patient to try dry, salty foods, such as crackers, to relieve the nausea
- Advise the patient to avoid hot, spicy, strong smelling, or fatty foods

For the patient with a dry mouth

- If approved by the physician, place a humidifier in the patient's room

- Provide the patient with artificial saliva

- Encourage the patient to drink 8 to 12 cups of liquids daily. Do not encourage liquids if the patient is on fluid restriction

- Advise the patient to avoid "dry" foods such as toast, crackers, etc. The patient should dunk foods in liquids to moisten them

- Provide the patient with sweet or tart foods and liquids, if the diet permits. This measure may help to increase the flow of saliva

For the patient who complains of soreness of the mouth and throat

- Advise the patient to avoid all substances that will irritate the mucous membrane lining of the mouth and throat These substances include tobacco, alcohol, and foods that are spicy, acidic, rough, dry, or coarse

- Encourage the patient to drink plenty of liquids (if patient's condition permits this)

- Provide the patient with cold foods such as chilled custard and milkshakes (if the prescribed diet permits)

- Obtain Chloroseptic spray for the use of the patient (if the physician approves)

For the patient who complains of feeling bloated or full shortly after beginning a meal

- Advise the patient to chew slowly and to take short breaks during the mealtime

- Do not serve the patient greasy, fried, or rich foods

- Ask the patient to avoid drinking liquids during meals

- Between meals, serve the patient liquids of high nutritive value such as milk and vegetable juices

- Advise the patient to avoid activities that cause air collection in the intestinal tract. These activities include chewing gum, smoking cigarettes, and drinking through a straw

- Give the patient a list of foods which are known intestinal gas formers. These foods include cooked dried beans, onions, cabbage, cauliflower, and nuts

For the patient who complains that food has a strange taste

- Advise the patient to drink liquids and to use sugar-free hard candies to take away strange tastes
- Encourage the patient to eat chicken, turkey, fish, cheese, or eggs if the patient complains that red meat does not taste right (if the patient's diet permits this)
- Encourage the patient to eat meals of cold foods
- Tell the patient that tart foods may make the flavors of other foods acceptable when used as seasoning. Lemon juice and vinegar are two examples of tart foods that can be used for this purpose

For the patient who complains of heartburn after eating

- *If the physician allows*, advise the patient to try bland, low-fat foods

  NOTE: Check the diet ordered by the physician before proceeding with this measure.

- Tell the patient not to lie down in bed for 2 hours after eating
- If approved by the physician, give the patient chilled antacids 1 hour and 3 hours after meals

For the patient who has an exaggerated or hyperactive gag reflex

- Do not serve the patient "lumpy" foods
- Give the patient foods which are smooth and soft in consistency

For the patient who has a disability

- Encourage the patient to independently feed as much as possible
- Obtain and use special adaptive feeding equipment and techniques
- Consult the dietician, physical therapist, or occupational therapist for ways to increase feeding independence

OBJECTIVE 12

Discuss nursing interventions for feeding problems due to a disability.

If the patient suffers from poor coordination

- Anchor feeding equipment with nonslip mats or suction cups
- Serve finger foods and foods that stick together

If the patient has poor hand grasp

- Use tape or foam rubber to make the handles on eating utensils larger

If the patient has lost upper extremity strength

- Raise the height of the feeding table as close as possible to the patient's mouth
- Use lightweight feeding equipment

If the patient is blind

- The "clock" method is used for certain blind people. In order to give a blind patient some idea as to where utensils and foods are located on a meal tray, the patient is instructed to visualize a clock face on the tray. The patient is told something similar to the following: "Your meat is at 6 o'clock. The vegetables are at 5 o'clock. Dessert is located at 12 o'clock..."

INFORMATION SHEET

APPLY PRINCIPLES OF DIET THERAPY

II

OBJECTIVE 13

Identify the characteristics of selected therapeutic diets.

INTRODUCTION

The following pages give details on therapeutic diets that the practical nurse will see ordered for patients on a routine basis. There are many other diets that the health care practitioner will encounter less frequently. The *Oklahoma Diet Manual* and similar books should be used as reference sources for these diets.

THERAPEUTIC DIET TYPES

- Regular diet
- Clear liquid
- Full liquid
- Pureed
- Edentulous (Mechanical Soft Diet)
- T and A (Tonsillectomy Diet)

THERAPEUTIC DIET	**Regular Diet** (House Diet, General diet)
Rationale for diet	Is ordered for any patient who does not require a diet modification or a therapeutic diet.
Disorders for which diet is ordered	Not applicable
Foods permitted	Most foods
Foods omitted or limited	Some institutions omit highly spiced, flavored or seasoned foods; gas-forming foods; and greasy foods.
Nutritional adequacy	Is nutritionally adequate for long-term use.

THERAPEUTIC DIET	**Clear liquid** (also called surgical liquid)
Rationale for diet	Used when it is necessary to reduce the amount of fecal material in the colon—before colon surgeries or x-rays; helps prevent dehydration.
Disorders for which diet is ordered	Before or after abdominal surgery; acute inflammatory conditions of gastrointestinal tract (digestive system); before x-rays of the colon (large bowel).
Foods permitted	• Fluids that can be seen through when held to the light; apple juice, cranberry juice; clear beef, chicken, or vegetable broth, coffee, tea; carbonated beverages. • Solids that become liquid at body temperature—chilled flavored gelatin, popsicles.
Foods omitted or limited	All solids except some foods that become liquid at body temperature.
Nutritional adequacy	Composed mainly of water and carbohydrates; nutritionally inadequate for long-term use.

THERAPEUTIC DIET	Full liquid
Rationale for diet	Used when conditions require easily swallowed and digested foods.
Disorders for which diet is ordered	Before and after abdominal surgery; chewing and swallowing problems; gastrointestinal problems.
Foods permitted	Eggnog, milk, cocoa, custards, puddings, ice cream, all clear liquids, refined cooked cereals, strained soups, all fruit juices, liquid dietary supplements.
Foods omitted or limited	Most solids, except some foods that become liquid at body temperature.
Nutritional adequacy	Nutritionally inadequate for long-term use. Is deficient in iron and fiber; iron supplement must be given if used on long-term basis.

THERAPEUTIC DIET	**Pureed**
Rationale for diet	Modified in consistency so that the food does not have to be chewed and is more easily swallowed.
Disorders for which diet is ordered	Fractured jaws which have been wired; dysphagia due to strokes, head and neck cancer, etc.
Foods permitted	All that can be cooked, finely chopped, and run through a sieve; all liquids
Foods omitted or limited	None
Nutritional adequacy	Is nutritionally adequate for long-term use. **NOTE:** This diet is distressing to some persons because it resembles "baby food."

THERAPEUTIC DIET	**Edentulous** (Mechanical Soft Diet)
Rationale for diet	Ill-fitting dentures; inability to wear dentures.
Foods permitted	Any food which can be easily chewed without teeth or dentures; foods which have been ground, blended, chopped, etc.
Foods omitted or limited	Nuts, most uncooked fruits and vegetables, tough meats, other foods not easily chewed.
Nutritional adequacy	Nutritionally adequate for long-term use with careful planning.

THERAPEUTIC DIET	**T and A** (Tonsillectomy Diet)
Rationale for diet	Designed to be chemically, mechanically, and thermally non-irritating to the throat; used to prevent pain and bleeding in the pharynx in the twenty-four hours following surgery.
Disorders for which diet is ordered	Tonsillectomy and/or adenoidectomy (removal of the tonsils and or adenoids).
Foods permitted	Ice chips; water; bland fruit juices—apple, apricot, pear, peach; carbonated beverages; popsicles; gelatin dessert; vanilla ice cream; iced tea.
Foods omitted or limited	Citrus juices; lemons, warm or hot beverages. Some physicians do not allow milk or foods containing milk **Drinking straws are not allowed**. It is best not to serve red liquids which if vomited, might be mistaken for fresh bleeding from the operative site.
Nutritional adequacy	Nutritionally inadequate for long-term use.

THERAPEUTIC DIETS

INTRODUCTION

The following pages give details on therapeutic diets that the practical nurse will see ordered for patients on a routine basis. There are many other diets that the health care practitioner will encounter less frequently. The *Oklahoma Diet Manual* and similar books should be used as reference sources for these diets.

THERAPEUTIC DIET

ADA Diet (American Diabetes Association and American Dietetic Association Exchange List for Meal Planning)

Rationale for diet

Prescribed by a physician to help normalize blood glucose levels and to help diabetics reach and maintain an ideal body weight.

NOTE: Many nutritionists are recommending that the diabetic's diet should be high in fiber and low in fat content.

Disorders for which diet is ordered

Diabetes mellitus (a disease that involves improper carbohydrate metabolism).

Foods permitted

Measured amounts of foods from six "exchange lists." The exchange lists are as follows:

- Starch/bread group
- Meat group
- Vegetable group
- Fruit group
- Milk group
- Fat group

A wide variety of foods can be selected from these lists.

Foods omitted or limited	"Concentrated carbohydrates"—foods with a high sugar content pies, cakes, jellies, jams, carbonated beverages, etc. NOTE: Occasionally, diabetics on the ADA diet are allowed small portions of some "sweets." These "sweets" include ice cream, angel food cake, and cookies.
Nutritional adequacy	Is nutritionally adequate for long-term use.

THERAPEUTIC DIET

American Heart Association

Rationale for diet

Prescribed to control the intake of saturated fats and cholesterol in an effort to prevent the development of atherosclerosis and damage to the arteries which supply blood to the heart muscle; also prescribed to control the intake of sodium. (Excessive sodium intake may lead to fluid retention and increased blood pressure).

Disorders for which diet is ordered

Patients at risk of developing heart disease caused by damage to arteries that surround the heart.

Foods permitted

- Limited amounts of certain foods—red meats; eggs (only two per week); fats of plant origin—liquid vegetable oils; unsalted nuts, etc; 3 oz. of liver a month; one serving of shrimp, lobster or sardines a week.
- Foods low in animal fat—skimmed milk and low-fat dairy products; fish and poultry without the skin; fresh, frozen, canned or dried fruits and vegetables; grain products such as whole grain or white bread; rice; macaroni.
- Foods low in sodium—low sodium buttermilk, low sodium salad dressings, fruit juices, etc.
- Sweets and desserts which are not prepared with saturated or animal fats.

Foods omitted or limited

- Foods high in animal fat—whole milk, cream, butter, lard, fatty meats, etc.
- Foods prepared with animal fat—vegetables with butter sauces, gravies made with animal drippings.
- Foods prepared with hydrogenated vegetable shortenings.

- Foods that contain saturated fats of plant origin. Chocolate and coconut contain saturated fats.
- Foods high in sodium—salted nuts and chips; pickles; sauerkraut; cured ham; frankfurters; corned beef; baking powder and baking soda.

Nutritional adequacy

If well planned, can be nutritionally adequate for long-term use; could be deficient in iron and fat-soluble vitamins if not well planned.

THERAPEUTIC DIET	**Bland** (diet as tolerated)
Rationale for diet	Prescribed to prevent chemical irritation to the mucous membrane lining of the upper gastrointestinal tract (throat, esophagus, and stomach).
Disorders for which diet is ordered	Acute and chronic upper gastrointestinal disorders —ulcers and cancer of the throat, esophagus or stomach; inflammation of the throat, esophagus, or stomach; hiatus hernia (a condition where gastric contents can enter the esophagus and cause irritation.
Foods permitted	All those that the patient can tolerate. (Those foods that do not produce distress symptoms—burning vomiting, pain, etc. Foods that are known to cause irritation to the mucous membranes of the upper gastrointestinal tract are listed below).
Foods omitted or limited	Known irritants to the mucous membrane lining of the upper gastrointestinal tract: • Black and red pepper • Chili powder • Alcohol • Chocolate and cocoa • Coffee • Decaffeinated coffee **NOTE:** Decaffeinated and regular coffee both stimulate the production of excessive hydrochloric acid by the stomach. Hydrochloric acid can be extremely irritating to an ulcer.
Nutritional adequacy	Is nutritionally adequate for long-term use.

THERAPEUTIC DIET	**Low fat** (gallbladder diet)
Rationale for diet	Helps to lessen fat-induced contractions of the gallbladder and pancreas (with an inflamed or infected organ, these contractions can cause abdominal pain); lessen the secretion of potentially irritating digestive enzymes designed to breakdown fats for absorption.
Disorders for which diet is ordered	Cholecystitis (inflammation of the gallbladder); Cholelithiasis (gall stones); Pancreatitis (inflammation of the pancreas); Conditions that affect the body's ability to absorb fat (cirrhosis of the liver, intestinal by-pass surgery, etc).
Foods permitted	Skim milk, lowfat milk and milk products (cheese, yogurt); eggs not prepared with fat; baked, broiled, roasted, or stewed red meats, poultry or fish; fresh frozen, canned, or dried fruits and vegetables; breads, rice and pastas.
Foods omitted or limited	Whole milk or whole milk products, pork, bacon, oil-packed fish, organ meats, gravies, cream sauces, avocado, fried foods, chocolate, coconut, nuts, pastries
Nutritional adequacy	Can be nutritionally adequate, if well-planned, for long-term use; care must be taken to provide patient with sources of fat-soluble vitamins.

THERAPEUTIC DIET	**Low fiber**
Rationale for diet	Ordered to lessen the irritating effect of fiber on the mucous membrane lining of the colon and to decrease the muscular movements of the walls of the colon; also ordered to reduce the amount of fecal material in the large bowel before X-rays or colon surgery.
Disorders for which diet is ordered	Diarrhea, gastrointestinal disturbances; pre- and post-operative periods for surgery of the large bowel (colon) or preparation for X-rays ordered.
Foods permitted	Milk; ice cream; cheese; eggs; beef; poultry; organ meats; pork; fish; smooth peanut butter; fruit and vegetable juices; canned fruits and vegetables not containing seeds, skins, or peels; fine-textured breads, cereals, flours and pastas.
Foods omitted or limited	Crunchy peanut butter; nuts; dried peas and beans; fruits and vegetables containing seeds, skins and peels; whole grain breads, cereals, and flours; brown rice and popcorn.
Nutritional adequate	Can be nutritionally adequate for long-term use with careful planning.

THERAPEUTIC DIET

High fiber

Rationale for diet

Used to stimulate muscular contractions of the intestinal walls to promote the elimination of fecal material and to draw water into the bowel in order to soften the stool.

NOTE: Research is indicating that the high fiber diet may be protective against colorectal cancers, may lower cholesterol levels, and, may help in the treatment of diabetes mellitus.

Disorders for which diet is ordered

Constipation; diverticulosis (a disease of the colon where pouches or sacs are found in the intestinal wall).

Foods permitted

All foods are permitted. The following types of foods should be increased in the diet:

- Nuts
- Dried peas and beans
- Whole grain products—crackers, cereals, muffins and breads
- Bran
- Raw, high fiber fruits and vegetables

  EXAMPLES: Apples, bananas, berries, oranges, carrots, cabbage

Foods omitted or limited

None

Nutritional adequacy

Is nutritionally adequate for long-term use.

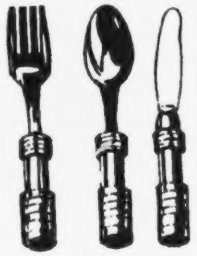
THERAPEUTIC DIET	**Low protein** (renal diet)
Rationale for diet	In renal (kidney) disease this diet is ordered to prevent the toxic accumulation of too much urea in the bloodstream and to prevent fluid and electrolyte imbalances. In liver disease, this diet is prescribed to prevent the toxic accumulations of ammonia in the bloodstream and to prevent fluid and electrolyte imbalances. **NOTE:** Ammonia is one of the by-products of protein breakdown by the body. A damaged or diseased liver sometimes cannot change ammonia to a substance which can be removed from the bloodstream by the kidneys.
Disorders for which diet is ordered	Kidney diseases; liver diseases
Foods permitted	Measured and limited amounts of certain meats, milk and dairy products; vegetables and fruits; bread and cereal products; and fats. Certain "calorie boosters" are added to this diet to provide enough calories for the body's energy needs and to spare proteins for their essential functions. "Calorie boosters" include non-diet carbonated beverages, hard candies, and jam and jellies.
Foods omitted or limited	Foods high in protein such as milk and meat are limited. Foods high in sodium are avoided. The patient is limited in the amount of liquid taken in a twenty-four hour period. Sometimes, the patient is limited as to the amount of potassium consumed in foods.
Nutritional adequacy	If the patient's protein restriction is great, this diet will be deficient in minerals and B-complex vitamins. Can be nutritionally adequate for long-term use if carefully planned and if the protein restriction is not too great.

THERAPEUTIC DIET	**Sodium Restricted** (salt restricted) **NOTE:** Table salt is high in sodium content.
Rationale for diet	Is used to promote the removal of excess fluids from the body's tissues and vascular system.
Disorders for which diet is ordered	Congestive heart failure; high blood pressure; kidney disease; cirrhosis of the liver.
Foods permitted	There are varying degrees of sodium restriction. The following are examples: • No Added Salt Diet • 4 gram Sodium Diet • 2 gram Sodium Diet • 1 gram Sodium Diet **NOTE:** Many raw and fresh fruits are low in sodium and can be used as desired with a sodium restricted diet.
Foods omitted or limited	• No Added Salt Diet—a regular diet is served but no table salt is allowed • 4 gram Sodium Diet—No table salt is served with meals. Small amounts of salt are allowed in cooking. Intake of high sodium foods is limited • 2 gram Sodium Diet—No table salt is served with meals. Small amounts of salt are allowed in cooking. Intake of high sodium foods is limited. Foods in which sodium compounds are used as preservatives or flavoring agents are avoided • 1 gram Sodium Diet—No salt is used in cooking or served with meals. There are strict limitations on the amounts of sodium-containing foods that can be eaten
Nutritional adequacy	If well-planned, can be adequate for long-term use. In a severely restricted sodium diet, it may be difficult to maintain nutritional adequacy.

ADAPTIVE EQUIPMENT

INTRODUCTION

Pictured here are pieces of equipment that can be used for persons with disabilities so that they can become more self-sufficient in feeding themselves.



Built-up handled utensils

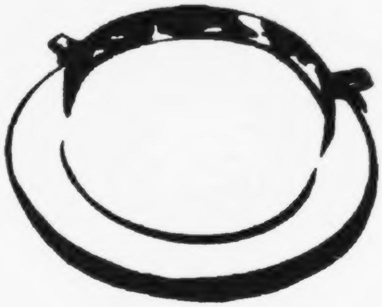
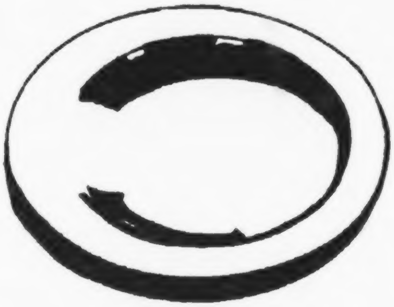
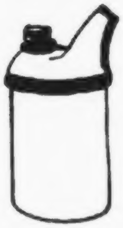


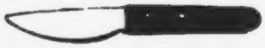
Plate guard



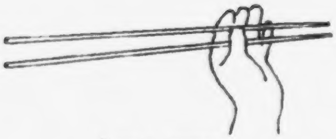
Scoop dish



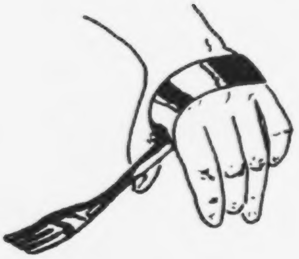
Covered plastic cup



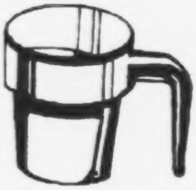
Rocker knife



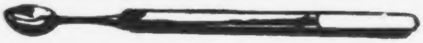
Long straws



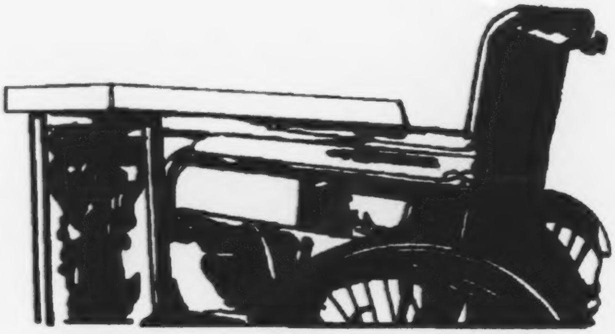
Universal cuff with utensil



Quad-grip cup



Long-handled utensils



Elevated table

ASSIGNMENT SHEET 1

APPLY PRINCIPLES OF DIET THERAPY

II

NAME ______________________________ SCORE ________

OBJECTIVE 14

Apply the nursing process to improve a patient's dietary intake.

INTRODUCTION

The nursing process is a five-step logical approach to administering nursing care. Using the nursing process helps to assure quality care for the patient. Steps of the nursing process that you will be using are as follows:

1. **Assessment**—Collecting all available information (data) about the patient in order to identify specific patient problems and needs. This data collection is done by interviewing the patient (or family and friends), by reviewing the patient's records, and by doing a physical examination of the patient.

2. **Analysis**—Reviewing all the patient data and organizing it into patterns and comparing the findings to normal standards according to theory. Identify your patient's specific needs, strengths, and weaknesses.

   NOTE: The nursing diagnosis will be developed by the RN for use by LPN in helping to plan care. The LPN is not responsible for making diagnoses.

3. **Planning**—Prioritizing the patient's specific problems or needs and deciding what nursing actions will help to solve the patient's problems. The goal of patient care of expected outcome of the nursing actions should be identified during the planning phase.

4. **Implementation**—Carrying out the nursing interventions decided upon during the planning phase. Interventions need to be directed at the specific patient problem and realistic for the patient.

5. **Evaluation**—Determining if patient care goals have been met and if the nursing actions have been useful in meeting the expected outcomes identified during the planning phase. The Nursing Process is ongoing and reassessment is required to determine goal attainment. If the nursing actions have been ineffective, one or more of the aspects of the patient care plan will need to be changed.

DIRECTIONS

Select a patient who is not eating and/or drinking an appropriate amount. Make certain it is a patient who will remain in your institution long enough to benefit from the five-step nursing process. Answer each question asked below if possible and take the appropriate actions as directed. LPN is responsible for four-steps only.

I. ASSESSMENT

A. Patient Interview—Ask the patient and/or friends and family the following questions:

1. What did the patient have to eat and drink yesterday? (Be specific if possible.)

Breakfast:

Lunch:

Dinner:

Between meals:

2. How does the patient compare the amount of food or drinks consumed, more or less than yesterday?

3. Does the patient think that he/she needs to eat more?

4. Does the patient think that he/she needs to drink more?

5. What does the patient say is keeping him/her from eating and/or drinking enough?

6. What does the patient think will help him/her to eat and/or drink more?

7. Does the patient have any food allergies?

____

8. Are there any foods the patient dislikes?

____

B. Review of Patient's Records

1. What is the amount of breakfast the patient has eaten over the past few days? (80%, 1/2, etc.)

   Example: May 1-20%, May 2-10%

   ____

2. What is the amount of lunch the patient has eaten over the past few days?

   ____

3. What is the amount of dinner the patient has eaten over the past few days?

   ____

4. Has the patient eaten any in-between meal snacks over the past few days?

   ____

5. What was the patient's daily (twenty-four hour) oral fluid intake for the past few days?

   Example: May 1-600 cc's, May 2-720 cc's

   ____

6. Is the patient on fluid restrictions? (Some patients are strictly limited as to the amount of fluids they are allowed on a daily basis. Do not increase the fluid intake of these patients).

   If yes, how may cc's is the patient allowed daily?

   ____

   ____

7. Has the physician ordered the patient to receive a therapeutic diet? If so, what is the diet? (bland, low fat, etc).

____

____

8. What are the patient's primary and secondary medical diagnoses?

____

____

9. Does the physician mention any nutritional problems in the progress notes and/or medical history of the patient?

   What are the problems mentioned?

____

____

C. Physical Examination

1. Does the patient have any obvious physical disabilities that would interfere with the ability to eat unassisted?

   What physical disabilities are present?

____

____

2. Does the patient display any physical symptoms that might affect intake of food and/or fluids?

   Example: Extreme shortness of breath, abdominal pain

   What are these symptoms?

____

____

3. What is the patient's height?

____

4. What is the patient's weight?

____

5. Is the patient underweight or overweight?

____

NOTE: A rough estimate of a patient's ideal weight can be obtained by following these general rules: (1) a five foot woman should weigh 100 pounds. For each inch of height above five feet, she is allowed to weigh five more pounds. So, a 5'9" woman would ideally weight around 145 pounds. (2) A five foot man should ideally weigh 110 pounds. For each inch of height above five feet, he is allowed to weigh five more pounds. So, a 5'10" man should weigh approximately 160 pounds. Used these general rules to determine if your patient is under- or over-weight.

II. ANALYSIS

A. Compare the data obtained from your patient to normal information presented in your text book.

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____

B. Identify any data that is abnormal (weight loss, anorexia, etc).

____

____

____

____

C. Identify any patterns of dysfunction (dysphagia, nausea, etc).

____

____

____

D. Identify the patient's strengths and weaknesses associated with nutrition.

E. Formulate nursing diagnosis associated with nutritional deficit or needs.

III. PLANNING

A. Review the plan of care. Does it meet the nutritional needs of your patient?

B. Does this patient need nursing intervention in order to increase intake? (See Assessment A. 1 through 4, B. 1 through 6 and 9, and C. 3 through 5)

C. What is/are the major reason(s) for this patient's poor intake? (See Assessment A. 5, B. 8, and C. 1 and 2)

D. What nursing interventions might help to increase this patient's intake? (See Assessment A. 6)

E. Does the patient agree that these interventions might help increase inadequate intake?

If not, what suggestions did the patient make that will help?

F. What is the expected outcome of the nursing interventions? Examples: The patient will increase caloric intake by 800 calories a day. The patient will drink at least 2000 cc's daily. The patient will gain one pound per week. The patient will eat at least 65% of each meal.

G. Do any of the nursing actions you have planned conflict with any of the physician's orders?

____

____

____

____

H. Does the dietician or physical therapist need to be consulted? (These experts can offer many specific and helpful ideas.)

____

I. If so, what suggestions were offered?

____

____

J. What nursing interventions do you think might help to increase the patient's intake? (See Objectives 11 and 12 in this unit for some suggestions.)

____

____

____

____

K. Do any of these nursing interventions conflict with the patient's stated food allergies and food dislikes? (See Assessment A. 7 and 8.)

____

If so, how will you change the nursing interventions?

____

____

____

____

L. Do any of the nursing interventions you have planned conflict with any of the physician's orders? (See Assessment B. 6 and 7.)

If so, how will you change the nursing interventions?

If necessary, have you consulted with the physician about a dietary order?

If you consulted with the physician, what was the response?

M. Does your nursing instructor approve of your plans?

NOTE: Have a conference with your nursing instructor to review your assessment and planning steps before proceeding with this assignment.

N. Have the nursing staff been properly notified of the nursing interventions which are needed for this patient?

O. Have you included the proposed interventions on the nursing care plan?

IV. IMPLEMENTATION

A. Implement plan of care.

____

____

____

____

B. What nursing interventions were taken in order to help the patient with intake problems?

____

____

____

____

V. EVALUATION

A. Did the nursing interventions produce the expected outcome within an appropriate amount of time?

____

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____

____

B. If expected outcomes were not met, what further actions may need to be taken? Examples: The patient will need to be reassessed and possibly new nursing interventions planned. The nursing interventions need to be carried out with more consistency.

____

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____

APPLY PRINCIPLES OF DIET THERAPY

NAME ______________________________ SCORE ______

OBJECTIVE 15

Teach a patient about a therapeutic diet.

INTRODUCTION

Many reference sources are available to assist nurses in teaching patients about their therapeutic diets. An excellent reference source is the *Oklahoma Diet Manual*, which is published by the Oklahoma Dietetic Association. Use this reference or a similar one to teach a patient about a therapeutic diet.

DIRECTIONS

To complete this assignment, you or your instructor should select a patient who is to remain on a therapeutic diet when returning to the home environment. As a student, you should choose a patient on one of the following therapeutic diets: low fiber, high fiber, fat restricted (low fat, gallbladder), diet as tolerated (bland), tonsillectomy, or Four Gram Sodium (mild sodium restriction). Other diets are complex and may not be appropriate for student teaching. Answer the questions listed below, and use this assignment sheet as a guide to instruct your patient about the diet. Have your instructor approve your answers before proceeding with your patient teaching.

NOTE: Some institutions prefer that dieticians provide the majority of patient nutritional instruction. Be sure to inquire about your training institution's policy regarding dietary instruction before teaching the patient.

Provide the following assessment data about your patient. The questions marked with an asterisk will be used to complete your patient teaching session.

1. Initial of the patient: ______________________________
2. Age of the patient: ______________________________
3. Diagnosis/diagnoses of the patient: ____________________

   ____

*4. Type of therapeutic diet the patient will be required to follow:

____

____

*5. How long will the patient have to remain on this type of diet? (one day, one year, indefinitely)

____

*6. Why is it necessary that the patient follow this diet plan?

____

____

____

EXAMPLES: 1) "This patient has an inflammation of the colon. This diet will lessen the irritation and stimulation of the large bowel."

2) "This patient has hypertension. This diet will promote the loss of excess body fluid from the vascular system. This will help to lower the patient's blood pressure."

NOTE: In the *Oklahoma Diet Manual*, the answer to the type of question asked above is partially covered in the "Treatment and Rationale" section that accompanies the discussion of each therapeutic diet.

*7. What types of foods are allowed on this diet?

____

____

NOTE: In the *Oklahoma Diet Manual*, the answers to the question above are found in the patient handout section which accompanies the discussion of each therapeutic diet.

*8. What foods must the patient avoid while following this diet?

____

____

____

NOTE: In the *Oklahoma Diet Manual*, the answers to the question above are found in the patient handout section which accompanies the discussion of each therapeutic diet.

*9. The patient must always learn what foods to include and what foods to avoid on a therapeutic diet. You may also need to convey other specific information to the patient regarding the diet. Is there any other information you need to include as you instruct the patient about the diet modification?

____

EXAMPLE: 1) "A salt substitute may be used only if the physician approves."

2) "Any foods that cause discomfort should be eliminated from the diet."

NOTE: In the *Oklahoma Diet Manual*, the answer(s) to the question above are located in the patient handout section that accompanies the discussion of each therapeutic diet. The portion of the patient handout section entitled "Helpful Hints" will contain many of the special patient instructions.

*10. The patient should receive printed handouts about therapeutic diet. What type of printed material do you intend to give the patient? Show this printed material to your instructor.

EXAMPLE ANSWERS:

1) "I intend to give the patient printed material which I obtained from the dietician at Heavenly Hospital."

2) "I intend to give the patient material which was copied from the diet manual that is kept at the nurses' desk."

NOTE: The *Oklahoma Diet Manual* contains patient handout sections which can be easily copied for distribution to patients.

Instructions for teaching

Follow the steps below.

1. Complete questions 1 through 10 above.
2. Have your instructor approve your written work before proceeding with your patient teaching.
3. Interview the patient before beginning your teaching session. Determine what the patient already knows about the therapeutic diet. It is not necessary to spend time teaching the patient something he already knows.
4. Use those questions above which are marked with asterisks (*) as an instructional guide. This is the type of information that needs to be taught to the patient.

ASSIGNMENT SHEET 1

- All questions should be answered or marked to indicate question was asked. The instructor will evaluate the appropriateness and correctness of the answers.

ASSIGNMENT SHEET 2

- All questions should be answered.
- The instructions for teaching are included but facility policy must be followed.
- If the student is not allowed to do the patient teaching, role-play would be suitable.

JOB SHEET 1	APPLY PRINCIPLES OF DIET THERAPY	II

NAME ______________________________ SCORE _______

OBJECTIVE 16a **Demonstrate the ability to feed a patient, sighted or blind.**

INTRODUCTION

Think how frustrating it would be not to be able to feed yourself. It would be even more frustrating to have someone feed you who had not mastered the skills involved. It may seem like a simple process, but to feed someone else takes patience and skills. Practice with a classmate in feeding each other and put yourself in the patient's place.

EQUIPMENT AND SUPPLIES

- Patient's tray
- Overbed table or suitable sturdy table
- Napkin or bib
- Equipment for oral hygiene—Emesis basin, mouthwash, toothpaste, toothbrush
- Washcloth and towel

PROCEDURE

Assessment and Analysis

1. Identify type of diet ordered
2. Check to see whether there is any reason why patient's meal should be delayed or omitted
3. Check on patient's previous need for assistance
4. Note any nursing diagnoses related to eating or feeding

Planning

5. When planning care, take into account the time food trays arrive on the unit
6. Plan time for feeding
7. Set tentative goal for amount the patient should eat
8. Wash your hands

Implementation

9. Identify the patient

10. Greet patient and explain procedure

11. Offer to assist patient to bathroom or to use bedpan or urinal

12. Wash hands

13. Assist patient in washing and drying hands and face

14. Offer oral hygiene

    NOTE: Some patient's will not eat because they have a bad taste in their mouth.

15. Prepare patient's room by removing clutter on top of table and surrounding areas

16. Discard any articles that may be unpleasant (wash hands)

17. Position patient comfortably in an upright position

18. Provide eyeglasses or dentures if worn

19. Protect bed linen

20. Obtain any special utensils needed

21. Check name on tray with that of patient. Tray will have a card or identification slip attached that lists the patient's name, room number, and the type of diet. Be sure that you have the right tray. Check for signs that the patient may be scheduled for surgery or tests that would not permit food intake. (Wash hands.)

22. Set tray in front of patient and uncover contents, lifting side of cover away from the patient first to prevent steam or aroma from being directed to the patient

    NOTE: Many times a patient who is ill may be overcome by an immediate, strong aroma from the tray.

23. Arrange everything on the tray for easy access and decide if patient is able to eat any portion of the meal unassisted

NOTE: Some patients who can not handle a fork or spoon may be able to hold their own drinking glass. Blind patients may sometimes help themselves if the food is set up as a clock would be, with instructions from the nurse on how things are arranged on the plate, such as meat at 8:00, potatoes at 3:00, and green beans at 12:00.

24. Sit down in a comfortable position, at patient's eye level if possible, to feed the patient

    NOTE: The patient will be more relaxed and feel less hurried if the nurse is sitting down.

25. Describe the food to the patient who is unable to see

26. Cut bulky and tough foods into bite-size pieces

27. Fill fork or spoon only half full; this helps to avoid spilling the food

28. Feed slowly, alternating foods and liquids

29. Warn the blind patient each time a feeding utensil approaches the mouth

30. Allow time between bites; stop occasionally to allow the patient to rest

31. Give liquids through a straw if the patient's condition permits this

    NOTE: When giving hot liquids, the patient should be warned to take only small sips until liquids cools to avoid being burned.

32. Allow patient to hold bread or any feeding utensil, if possible

33. Encourage the patient to take as much of the diet as possible, but do not cause distress by an overly vigorous emphasis on nutrient consumption

34. Clean the table after the patient has finished

35. Assist patient in cleansing hands and to brush teeth if desired

36. Reposition the patient, make patient comfortable

37. Wash hands

Evaluation

38. Evaluate using the following criteria:

    a. Patient is satisfied and comfortable

    b. Amount taken was observed and measured or recorded, if necessary

    c. Problems encountered were noted

Documentation

39. Record the following data:

    a. Type and amount of food taken

       NOTE: In most hospitals, the amount of food taken at each meal is recorded in percentages.

       Example: "Consumed 50% of breakfast."

    b. Patient response

    c. New information needed for the nursing care plan

JOB SHEET 2

APPLY PRINCIPLES OF DIET THERAPY

II

OBJECTIVE 16b **Demonstrate the ability to feed a patient with dysphagia.**

NAME ______________________ SCORE ________

INTRODUCTION

Any student who feeds a patient with dysphagia should know how to perform pharyngeal (throat) and tracheal suctioning procedures. Students should also be aware of the techniques used to dislodge an airway obstruction. Aspiration of liquids or solid foods into the respiratory tract is possible if the patient has difficulty in swallowing or has paralysis of the muscles used in swallowing.

EQUIPMENT AND SUPPLIES

- Patient's tray
- Overbed table or suitable sturdy table
- Napkin or bib
- Equipment for oral hygiene—Emesis basin, mouthwash, toothpaste, toothbrush, oral swabs
- Washcloth and towel
- Large 60 cc syringe with irrigating tip, if necessary
- Equipment needed for suctioning the upper respiratory airways—Suction catheter, connecting tubing, constant suction source, gloves, and water

PROCEDURE

Assessment and Analysis

1. Identify patient
2. Check on patient's need for assistance

   Inquire as to whether the patient has tongue, throat, or mouth paralysis on one side

   NOTE: Many patients with strokes have throat, tongue, or mouth paralysis on one side of the body. The nurse should make inquiries of charge personnel as to whether the patient has this problem. The nurse also needs to determine which side is affected.

3. Note any nursing diagnoses related to eating or feeding

Planning

4. When planning care, allow time to test suctioning equipment to make certain it is functioning properly
5. If a syringe is being used to feed the patient, check the feeding syringe for cleanliness. Wash the syringe, if necessary
6. Arrange for adequate time to complete the procedure in an appropriate manner. Do not hurry the patient

Implementation

7. Communicate with the patient what you are going to do
8. Offer to assist the patient to the bathroom or to use the bedpan or urinal
9. Wash hands after assisting patient to use bedpan or urinal
10. Assist the patient in washing and drying face and hands
11. Offer oral hygiene
12. Prepare patient's room by removing clutter on top of table and surrounding areas
13. Discard any articles that may be unpleasant
14. Place the patient in an upright position, if possible

    NOTE: It is especially important that a patient with dysphagia be placed in an upright position, if allowed.

15. Provide eyeglasses or dentures if worn
16. Protect bed linen
17. Wash hands
18. Position the patient on unaffected side and in an upright position if throat, tongue, or mouth paralysis is present
19. Position the patient's head so that it is not pushed or tilted back

    NOTE: Tilting the head backwards makes swallowing difficult and creates the possibility of aspiration.

20. Check the tray and the identity of the patient before serving

21. Set tray in front of patient after uncovering the contents

22. Arrange everything on the tray for easy access and decide if the patient is able to eat any portion of the meal unassisted. Allow the patient to assist, if possible

23. Give the patient a test swallow of water before giving other liquids or solid foods

    NOTE: If the patient cannot swallow or if the patient chokes or coughs violently, do not proceed with the feeding until the charge nurse or the patient's doctor has been consulted. Suction any unswallowed water from the patient's throat.

24. Sit down in a comfortable position if you are to feed the patient

25. Cut any bulky foods into small pieces

    NOTE: Foods that can easily cause choking are best eliminated from the diet

26. If the patient has paralysis of the throat, tongue, or mouth, place food or liquids on the unaffected side of the mouth beyond the tip of the tongue. If a syringe is used to feed the patient liquids and semi-solids, place the irrigating tip on the unaffected side also

27. Encourage the patient to take small sips or bites and swallow immediately

28. If a feeding syringe is used, introduce only 5 cc of liquid into a patient's mouth at a time

29. Delay feeding any additional foods or liquids until swallowing is completed

30. Stop occasionally to allow the patient to rest

31. Encourage the patient to take the diet, but do not cause distress by an overly vigorous emphasis on nutrient consumption

32. Clean the table after the patient has finished

33. Assist the patient with oral hygiene and check the patient's mouth for any retained food

34. Gently remove any retained food from the patient's mouth

35. Reposition patient, make patient comfortable

36. Wash hands

Evaluation

37. Evaluate using the following criteria:

    a. Patient is satisfied and comfortable

    b. Amount taken was observed and measured or recorded

    c. Problems encountered were noted

Documentation

38. Record the following data:

    a. Type and amount of food taken

       Chart and report the consistency of food that is most easily swallowed by the patient. Many times following a stroke, thick liquids and semi-solids are more easily swallowed than watery liquids

    b. Patient response

    c. New information needed for the nursing care plan

APPLY PRINCIPLES OF DIET THERAPY

NAME ______________________________ SCORE _______

JOB SHEET 1

Demonstrate ability to feed a patient, sighted or blind.

EQUIPMENT AND SUPPLIES

- Patient's tray
- Overbed table or suitable sturdy table
- Napkin or bib
- Equipment for oral hygiene—Emesis basin, mouthwash, tooth paste, toothbrush
- Washcloth and towel

Student:	Yes	No
1. Identified type of diet ordered		
2. Checked to see if patient's meal should be delayed or omitted		
3. Checked on patient's need for assistance		
4. Noted any nursing diagnoses related to eating or feeding		
5. Planned care for food arrival on unit		
6. Planned time for feeding		
7. Set tentative goal for amount the patient should eat		
8. Washed hands		
9. Identified the patient		
10. Greeted patient and explained procedure		
11. Offered to assist patient to bathroom or to use bedpan or urinal		

Student:	Yes	No
12. Washed hands		
13. Assisted patient in washing and drying hands and face		
14. Offered oral hygiene		
15. Prepared patient's room by removing clutter on top of table and surrounding areas		
16. Discarded any articles that may be unpleasant (washed hands)		
17. Positioned patient comfortably in an upright position		
18. Provided eyeglasses or dentures if worn		
19. Protected bed linen		
20. Obtained any special utensils needed		
21. Checked name on tray with that of patient, and with surgery schedule (washed hands)		
22. Set tray in front of patient and uncover contents, lifting side of cover away from the patient first to prevent steam or aroma from being directed to the patient		
23. Arranged everything on the tray for easy access and for patient capable of eating unassisted		
24. Sat down in a comfortable position, at patient's eye level if possible, to feed the patient		
25. Described the food to the patient if necessary		
26. Cut bulky and tough foods into bite-size pieces		

Student:	Yes	No
27. Filled fork or spoon only half full		
28. Fed slowly, alternating foods and liquids		
29. Warned the blind patient each time the mouth was approached with eating utensil		
30. Allowed time between bites; stopped occasionally to allow the patient to rest		
31. Gave liquids through a straw, if permitted		
32. Allowed patient to hold bread or any feeding utensil		
33. Encouraged the patient to take as much of the diet as possible		
34. Cleaned the table after the patient finished		
35. Assisted patient in cleansing hands and to brush teeth if desired		
36. Repositioned the patient, made patient comfortable		
37. Washed hands		
38. Evaluated using the following criteria:		
a. Patient satisfied and comfortable		
b. Amount taken observed and measured or recorded, if necessary		
c. Problems encountered noted		
39. Recorded data:		
a. Type and amount of food taken		
b. Patient's response		
c. New information needed for the nursing care plan		

EVALUATOR'S COMMENTS

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See performance evaluation key). A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
	4	3	2	1
Fed a patient, sighted or blind				

EVALUATOR'S COMMENTS

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AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 - Skilled—Can perform job with no additional training
3 - Moderately skilled—Has performed job during training program; limited additional training may be required
2 - Limited skill—Has performed job during training program; additional training is required to develop skill
1 - Unskilled—Is familiar with process; but is unable to perform job

______________ (Date)

______________ (Evaluator's Signature)

______________ (Evaluator's Position)

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PRACTICAL TEST 2

APPLY PRINCIPLES OF DIET THERAPY

II

NAME ______________________________ SCORE ________

JOB SHEET 2

Demonstrate ability to feed a patient with dysphagia.

EQUIPMENT AND SUPPLIES

- Patient's tray
- Overbed table or suitable sturdy table
- Napkin or bib
- Equipment for oral hygiene—emesis basin, mouthwash, toothpaste, toothbrush, oral swabs
- Washcloth and towel
- Large 60 cc syringe with irrigating tip, if necessary
- Equipment needed for sectioning the upper respiratory airways—Suction catheter, connecting tubing, constant suction source, exam gloves, sterile gloves, sterile water or saline, tap water

Student:	Yes	No
1. Identified patient		
2. Checked on patient's need for assistance		
3. Noted any nursing diagnoses related to eating or feeding		
4. Planned care, allowed time to test suctioning equipment to make certain it functioned properly		
5. If a syringe was used to feed the patient, checked the feeding syringe for cleanliness. Washed the syringe, if necessary		

Student:

	Yes	No
6. Arranged for adequate time to complete the procedure in an appropriate manner		
7. Communicated with the patient about the procedure		
8. Offered to assist the patient to the bathroom or to use the bedpan or urinal		
9. Washed hands after assisting patient to use bedpan or urinal		
10. Assisted the patient in washing and drying face and hands		
11. Offered oral hygiene		
12. Prepared patient's room		
13. Discarded any unpleasant articles (washed hands)		
14. Placed the patient in an upright position, if possible		
15. Provided eyeglasses or dentures if worn		
16. Protected bed linen		
17. Washed hands		
18. Positioned the patient on unaffected side and in an upright position if throat, tongue, or mouth paralysis is present		
19. Positioned the patient's head so that it is not pushed or tilted back		
20. Checked the tray and the identity of the patient before serving		
21. Set tray in front of patient after uncovering the contents		

Student:	Yes	No
22. Arranged everything on the tray for easy access and for patient to eat unassisted		
23. Gave the patient a test swallow of water before giving other liquids or solid foods		
24. Sat down in a comfortable position to feed the patient		
25. Cut any bulky foods into small pieces		
26. If the patient had paralysis of the throat, tongue, or mouth, placed food or liquids on the unaffected side of the mouth beyond the tip of the tongue. If syringe was used to feed the patient liquids and semi-solids, placed the irrigating tip on the unaffected side also		
27. Encouraged the patient to take small sips or bites and swallow immediately		
28. If a feeding syringe was used, introduced only 5 cc of liquid into patient's mouth at a time		
29. Delayed feeding any additional foods or liquids until swallowing was completed		
30. Stopped occasionally to allow the patient to rest		
31. Encouraged the patient to take the diet		
32. Cleaned the table after the patient finished		
33. Assisted the patient with oral hygiene and checked the patient's mouth for any retained food		

Student:	Yes	No
34. Gently removed any retained food from the patient's mouth		
35. Repositioned patient, made patient comfortable		
36. Washed hands		
37. Evaluated using the following criteria:		
a. Patient satisfied and comfortable		
b. Amount taken observed and measured or recorded		
c. Problems encountered noted		
38. Record the following data: a. Type and amount of food taken b. Patient's response		

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See performance evaluation key). A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:	4	3	2	1
Fed a patient with dysphagia				

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 - Skilled—Can perform job with no additional training
3 - Moderately skilled—Has performed job during training program; limited additional training may be required
2 - Limited skill—Has performed job during training program; additional training is required to develop skill
1 - Unskilled—Is familiar with process; but is unable to perform job

(Date)

(Evaluator's Signature)

(Evaluator's Position)

WRITTEN TEST

APPLY PRINCIPLES OF DIET THERAPY

II

NAME ______________________________ SCORE ________

OBJECTIVE 1

Match terms associated with nutrition to their correct definitions. Write the letter of the correct answer in the blanks provided. ("aa" is considered as one letter, Question is continued on the following page.)

___ 1. Pertaining to the body processes which produce energy and produce, maintain, and destroy the living matter of cells and tissues

___ 2. An inflammation of the tongue

___ 3. Elevated blood glucose

___ 4. A disorder caused by low blood calcium levels which is characterized by muscle tremors and spasmodic muscle contractions

___ 5. An enlargement of the thyroid gland

___ 6. Substances such as potassium and sodium that become electrically charged when dissolved in water

___ 7. A deficiency in the number and/or characteristics of red blood cells

___ 8. Excessive bleeding in an infant that is corrected by the administration of Vitamin K

___ 9. An elevated blood sodium level

___ 10. A compound found in the blood and urine that is a product of protein metabolism

___ 11. Those nourishments prescribed by a physician for the treatment of a disease or the symptoms of a disease

a. Anemia
b. Anorexia
c. Atherosclerosis
d. Botulism
e. Dementia
f. Dermatitis
g. Dysphagia
h. Electrolyte
i. Fecal
j. Glossitis
k. Goiter
l. Hemoglobin
m. Hemorrhagic disease of the newborn
n. Hyperglycemia
o. Hyperkalemia
p. Hypernatremia
q. Hypogylcemia
r. Hypokalemia
s. Hyponatremia

___12. An inadequate transfer of nutrients from the intestinal tract into the bloodstream or lymph channels

___13. A disease of the nervous system caused by the toxins of certain bacteria which grow in spoiled food

___14. A disease of childhood, characterized by softening of the bones which results in bowed legs and other skeletal abnormalities

___15. A condition characterized by a softening of the bones in the adult with resulting deformity, weakness, and pain

___16. Pertaining to the waste products discharged from the intestine

___17. A lowered blood sodium level

___18. Difficulty in swallowing

___19. An inflammation of the skin

___20. Mental deterioration, especially when due to a physical cause

___21. A narrowing of arteries caused by deposits of fatty substances and other materials on the linings of the arterial walls

___22. A lack of appetite

___23. The iron-containing pigment of red blood cells that carries oxygen

___24. An elevated blood potassium level

___25. A lowered blood potassium level

___26. A disease caused by the ingestion of parasitic worms into the gastrointestinal system

___27. A lowered blood (sugar) glucose

t. Malabsorption

u. Metabolic

v. Osteomalacia

w. Rickets

x. Tetany

y. Therapeutic diet

z. Trichinosis

aa. Urea

OBJECTIVE 2

Identify factors that influence food habits. Write an "X" in the blank before each factor that influences food habits.

___ 1. Political beliefs

___ 2. Availability of food

___ 3. Mobility of population

___ 4. Emotional and physical health status

___ 5. Personal income

___ 6. Personal attitudes about food

___ 7. Age

___ 8. Mass communication

___ 9. Nationality and culture

__ 10. Food misinformation

__ 11. Attitudes about personal hygiene

__ 12. Region of country where living

__ 13. Religious beliefs

OBJECTIVE 3

Identify the effects of excessive nutrients in the diet. Write the letter of the correct answer in the blank.

___ 1. Persons who consume excessive amounts of fats and carbohydrates in their diets are at risk of developing

a. fatty degeneration of the nervous tissue
b. obesity
c. cancer
d. an inability to digest proteins

____2. Blood vessel damage which leads to heart disease and kidney failure might be prevented by controlling the intake of

a. water-soluble vitamins

b. fats

c. carbohydrates

d. fiber

____3. The over-consumption of what two nutrients may lead to calcium deficiencies?

a. Proteins, fats

b. Fats, carbohydrates

c. Carbohydrates, fiber

d. Fiber, protein

____4. Which of the following patients is more likely to develop damage to the kidneys?

a. The patient who consumes too much sodium chloride (salt).

b. The patient who takes more than the recommended daily allowance of vitamin C.

c. The patient who uses an excessive amount of salt substitute

d. The patient who takes excessive amounts of vitamins A and D

____5. A patient who has tissues that are swollen due to excessive fluid retention should reduce his or her intake of

a. sodium

b. iron

c. potassium

d. calcium

___ 6. Tissue damage to the heart and liver can be caused by the over-consumption of

a. potassium

b. fluoride

c. phosphorus

d. iron

___ 7. High blood levels of potassium are associated with

a. an increased incidence of damage to the central nervous system

b. inflammation and destruction of the bones and joints

c. disturbances in the rate and rhythm of the heart

d. a lack of red blood cells in the circulating blood

___ 8. Suppression of the functions of the thyroid gland may be due to an excessive intake of

a. vitamin C

b. iron

c. iodine

d. vitamin D

OBJECTIVE 4 **Identify reasons for the two primary causes of nutritional deficiency.**

1. Write an "X" in the blank beside each reason for an inadequate intake of foods.

___ a. Poor food habits

___ b. Consumption of nutrient-deficient food

___ c. Anorexia due to disease

___ d. Nutritional training in the school systems

___ e. Alcoholism

___ f. Fatigue due to moderate exercise

___ g. Inappropriate therapeutic diets

___ h. Lack of proper food because of poverty

___ i. Lack of proper food because of living in an urban area

___ j. Emotional disturbances

2. Write an "X" in the blank beside each reason for an inadequate use of ingested food.

___ a. Inability of digestive tract to absorb nutrients because of lack of minerals in the water supply.

___ b. Faulty absorption in the digestive tract due to poor dietary practices

___ c. Faulty absorption in the digestive tract due to gastrointestinal diseases

___ d. Food allergies and intolerances

___ e. A rapid gain in body weight

___ f. Metabolic disturbances

___ g. Reduced manufacture of vitamins in the intestinal tract following oral antibiotic therapy

OBJECTIVE 5

Identify the disorders and assessment data associated with carbohydrate deficiencies. Write an "X" in the blank before the disorders and symptoms associated with a carbohydrate deficiency.

___ 1. Loss of weight and muscle wasting

___ 2. Ketones in the blood and urine

___ 3. High blood sugar levels

___ 4. Fatigue and weakness

___ 5. Mental and emotional changes

___ 6. Abnormal blood clotting

___ 7. Blindness

OBJECTIVE 6

Identify disorders and assessment data associated with protein deficiencies. Write an "X" in the blank before the disorders and assessment data associated with protein deficiencies.

___ 1. Anemia

___ 2. Diarrhea

___ 3. Retarded wound healing

___ 4. Convulsions

___ 5. Rickets

___ 6. Growth failure

___ 7. Edema in the tissues

___ 8. Lowered resistance to infection

OBJECTIVE 7

Identify the disorders and assessment data associated with deficiencies of selected vitamins. Write the letter of the correct answer in the blank provided.

____1. A deficiency of folic acid and/or vitamin B12 is associated with the following blood disorder

a. a clotting defect

b. an elevated white blood cell count

c. anemia

d. lowered protein blood levels

____2. Night blindness can be due to a dietary deficiency of

a. vitamin D

b. vitamin B_6

c. vitamin A

d. vitamin C

____3. Persons with severe bruising of the skin could have a deficiency of

a. vitamins A and D

b. vitamins C and K

c. vitamins B_1 and B_2

d. niacin and folic acid

____4. Patients should have an adequate supply of the B-complex vitamins in order to prevent disorders of the

a. nervous system

b. urinary system

c. respiratory system

d. reproductive system

___ 5. A lack of vitamin D in the diet may lead to the following disease

a. rickets
b. pernicious anemia
c. pellagra
d. scurvy

___ 6. A susceptibility to infection is associated with the lack of

a. vitamin D
b. folic acid
c. niacin
d. vitamin C

OBJECTIVE 8

Identify the disorders and assessment data associated with deficiencies of selected minerals. Write the letter of the correct answer in the blank. Only one answer will be acceptable.

___ 1. A deficiency of iron is associated with an abnormality of

a. the white blood cells
b. the red blood cells
c. the fluid in the bloodstream
d. the blood clotting factors

___ 2. You have been told that a patient suffers from a sodium deficiency. Which of the following nursing measures would be especially important for this patient?

a. Encouraging the patient to exercise vigorously
b. Checking the patient's respirations hourly
c. Giving the patient frequent mouth care
d. Taking an accurate daily weight

____3. Suppression of the functions of the thyroid gland is associated with a deficiency of

a. iron

b. iodine

c. zinc

d. phosphorus

____4. Bone and teeth abnormalities may be associated with a deficiency of

a. calcium

b. iron

c. zinc

d. sodium

____5. Which of the following are signs and symptoms of a potassium deficiency?

a. Slow clotting of the blood and diarrhea

b. Glossitis and paralysis of respiratory muscles

c. Mental confusion and disturbances in the heart rhythm

d. Hormonal imbalances and a low out-put of urine

OBJECTIVE 9

Identify three types of food poisoning. Write an "X" in the blank before each type of food poisoning.

____1. Poisons found in foods in their natural state

____2. Poisons that enter foods as the foods are being absorbed by the digestive tract

____3. Chemicals that are added to foods

____4. Disease-producing organisms or their toxins in foods

OBJECTIVE 10

Identify nursing actions that can prevent the transmission of disease-producing organisms or their toxins in foods. Write an "X" in the blank before each nursing action that might prevent the transmission of disease-producing organisms or their toxins in foods.

___ 1. The nurse diplomatically persuades family members not to serve the patient brewed ice tea from a thermos that they have brought from home. These family members live in the same town in which the hospital is located.

___ 2. The patient tells the nurse that the chicken in his casserole is not well-cooked. The nurse examines the casserole and notices that the chicken is oozing pink fluid. She returns the chicken casserole to the dietary department and obtains another meat dish for the patient.

___ 3. The nurse carefully warms a hospital-made liquid tube feeding to room temperature before giving it to the patient. She does so by taking the feeding from the refrigerator; putting it in a clean, covered container; and allowing it to sit in the clean utility room for at least two hours.

___ 4. The nurse opens a can of soup which she plans to heat and serve to the patient. Because the contents of the can do not smell "quite right," the nurse tastes the warmed soup repeatedly before serving it to the patient.

___ 5. A patient requests that the nurse serve him a milkshake that contains raw, beaten eggs. The nurse explains to the patient that raw eggs may carry live bacteria that could be harmful. She suggests that the patient take some other nourishment.

___ 6. The nurse calls her director and informs the director she will be unable to do bedside patient care until her physician allows her to do so. The nurse tells the director that the physician has just determined that the "sores" on her hands are caused by a staphylococcal infection.

___ 7. The nurse wears examination gloves as she empties and cleans a patient's bedpan. The bedpan contains some fecal material.

OBJECTIVE 11

Discuss nursing interventions used to increase a patient's intake of food. Below are listed some patient situations that might be commonly encountered by the nurse. Discuss nursing interventions to be used in each situation. Make your answer as complete as possible.

Situation 1: Mrs. Ballard is a sixty-five year old female who is receiving chemotherapy for oat-cell carcinoma of the lung. She refuses to eat more than 10% of the meals and snacks that are offered to her in the hospital. Her stated reasons for not eating are persistent nausea and a "sore throat." The physician has told the nurse that Mrs. Ballard can eat "anything she can keep down." Mrs. Ballard smokes approximately one pack of cigarettes on a daily basis. Her medication orders include Chloroseptic spray and an antiemetic.

Situation 2: Mr. Harding has a diaphragmic hernia. A diaphragmic hernia allows acid from the stomach to enter the esophagus and causes damage to that organ. Mr. Harding refuses to eat many meals because he says that he has heartburn and a "bloated stomach" after he eats. Mr. Harding's physician has ordered a low-fat diet and antacids for her patient.

OBJECTIVE 12

Discuss nursing interventions for feeding problems due to a disability. Below is listed a patient situation. Discuss interventions that might be used in this situation.

Mr. Jones is recovering from a long illness that has kept him in bed without a regular exercise program. He wants to care for himself but he finds that he has great difficulty feeding himself because of poor coordination, poor hand grasp, and lost upper extremity strength.

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OBJECTIVE 13

Identify the characteristics of selected therapeutic diets. Write the letter of the correct answer in the blanks. Only one answer will be acceptable.

___ 1. A patient has been ordered to be placed on a regular or house diet by the physician. The nurse knows that this is the type of diet ordered for patients who

a. need a strict calorie count

b. must have frequent small, meals

c. do not need a therapeutic diet

d. cannot eat non-institutional foods

___ 2. Which of the following might be omitted from a regular diet?

a. Concentrated sweets

b. High fiber foods

c. Gas-forming foods

d. Cold liquids

____3. Which of the following liquids would be appropriate for both a clear liquid and a full liquid diet?

a. Orange juice

b. A carbonated beverage

c. Strained soup

d. Eggnog

____4. Many times a clear liquid diet is ordered for persons with a disorder of the

a. urinary tract

b. digestive tract

c. respiratory tract

d. nervous system

____5. A lunch tray for a patient on a edentulous diet would most likely include

a. broiled hamburger, cottage cheese and cooked pea salad, sherbet, and iced tea

b. fried and battered white fish, broiled potatoes, gelatin mold salad with raw apple slices, whole milk

c. meat loaf, raw spinach salad with bacon bits, sponge cake, and coffee

d. broiled steak, mashed potatoes, boiled squash, ice cream with pecan pieces and hot tea

____6. Food that is prepared for consumption by cooking it, chopping it, and running it through a sieve is called

a. pre-mixed food

b. diced food

c. liquid food

d. pureed food

___ 7. The diet used for the first few meals after a tonsillectomy and adenoidectomy is called the

a. T and A diet

b. hot liquid diet

c. throat surgery diet

d. citrus juice diet

___ 8. Which of the following liquids would be most appropriate for a person who has had a tonsillectomy?

a. Hot tea

b. Chilled cranberry juice

c. Hot cocoa

d. Chilled apple juice

___ 9. Which of the following diets is *most likely* to be nutritionally adequate for long-term use?

a. Clear liquid diet

b. Edentulous diet

c. Full liquid diet

d. Regular diet

NOTICE The following assignment sheets and job sheets are not a part of the written test. If these activities have not been completed, check with your instructor.

OBJECTIVE 14 **Apply the nursing process to improve patient's dietary intake.** SCORE ______

OBJECTIVE 15 **Teach a patient about a therapeutic diet.** SCORE ______

OBJECTIVE 16 **Demonstrate the ability to:**

a. Feed a patient, sighted or blind. RATING ______

b. Feed a patient with dysphagia. RATING ______

WRITTEN TEST ANSWERS

APPLY PRINCIPLES OF DIET THERAPY

II

OBJECTIVE 1

1. u
2. j
3. n
4. x
5. k
6. h
7. a
8. m
9. p

10 aa.
11. y
12. t.
13. d
14. w
15 v
16. i
17 s
18. g

19. f
20. e
21. c
22. b
23. l
24. o
25. r
26. z
27. q

OBJECTIVE 2

2, 3, 4, 5, 6, 7, 8, 9, 10, 13

OBJECTIVE 3

1. b
2. b
3. a
4. d
5. a
6. d
7. c
8. c

OBJECTIVE 4

1. a, b, c, e, g, h, j
2. b, c, d, f, g

OBJECTIVE 5

1, 2, 4, 5

OBJECTIVE 6

1, 3, 6, 7, 8

OBJECTIVE 7

1. c
2. c
3. b
4. a
5. a
6. d

OBJECTIVE 8

1. b
2. d
3. b
4. a
5. c

OBJECTIVE 9

1, 3, 4

OBJECTIVE 10

2, 5, 6, 7

OBJECTIVE 11

Situation 1: Answer should include

- Serving the patient small frequent meals that consist of room temperature or cold foods
- Advising the patient to chew thoroughly and slowly during meals and to avoid hot spicy, acidic, strong smelling, or fatty foods
- Advising the patient to decrease the number of cigarettes she smokes or to stop smoking
- Administering the antiemetic thirty minutes to one hour before the meals are served
- Having the patient use Chloroseptic spray

NOTE: Advice on drinking liquids with meals and the use of dry, salty foods is best omitted. These nursing interventions differ for patients with sore throats and for patients with persistent nausea.

Situation 2: Answer should include

- Advising the patient to chew slowly and to take short breaks during the mealtime
- Serving the patient nutritious liquid between meals
- Asking the patient to avoid drinking liquids while eating
- Giving the patient a list of foods and activities that cause air collection in the intestinal tract
- Telling the patient not to lie down in a bed for two hours after eating
- Stressing the importance of avoiding fatty, rich, and spicy foods
- Giving the patient chilled antacids one hour and three hours after meals

OBJECTIVE 12

Answer should include

- Raising the height of the feeding table
- Using lightweight feeding equipment
- Using tape or foam rubber to make the handles on eating utensils larger

OBJECTIVE 13

1. c
2. c
3. b
4. b
5. a
6. d
7. a
8. d
9. d

NOTICE

The following assignment sheets and job sheets are not a part of the written test. If these activities have not been completed, check with your instructor.

OBJECTIVE 14	Refer to answers to Assignment Sheet 1.
OBJECTIVE 15	Refer to answers to Assignment Sheet 2.
OBJECTIVE 16	Refer to Practical Tests for Job Sheets 1 and 2.